



DEPARTMENT OF THE ARMY

JUSTIFICATION OF ESTIMATES FOR FISCAL YEAR 1978 **Submitted to Congress** January 1977







RESEARCH DEVELOPMENT, TEST AND EVALUATION, ARMY

COPY

FILE

300

ON UA

DISTRIBUTION STAT Approved for publi Distribution Uni

AD NO. TILE COPY

8281190ADA

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered) Fig.	al years
REPORT DOCUMENTATION PAGE	READ INSTRUCTIONS BEFORE COMPLETING FORM
	NO. 3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle)	5. TYPE OF REPORT & PERIOD COVER
Justification of Estimates for FY 1978.	Final FY 1978,
Submitted to Congress January 1	
7. AUTHOR(s)	8. CONTRACT OR GRANT NUMBER(6)
None	None
9. PERFORMING ORGANIZATION NAME AND ADDRESS	10. PROGRAM ELEMENT, PROJECT, TA
Office, Deputy Chief of Staff for Resea	rcn,
Development, & Acquisition, DA (DAMA-PP Pentagon, Washington DC 20310 (ODCSRDA)	R)
11. CONTROLLING OFFICE NAME AND ADDRESS	12 REPORT DATE
ODCSRDA, DA	January 1977
, , , , , , , , , , , , , , , , , , ,	87
14. MONITORING AGENCY NAME & ADDRESS(If different from Controlling Offi	ce) 15. SECURITY CLASS. (of this report)
onganna na (12) and	INGLAGOTETED
ODCSRDA, DA	UNCLASSIFIED 15a. DECLASSIFICATION/DOWNGRADIN
I manufactured	SCHEDULE SCHEDULE
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different	nt from Report)
0	
Same	
18. SUPPLEMENTARY NOTES	
C	Ciri matanial
Sanitized version - deleting all classi	iled material
19. KEY WORDS (Continue on reverse side if necessary and identify by block nu	mber)
Justification of Estimates	
This document contains	
20. ABSTRACT (Continue on reverse side if necessary and identify by block num	nber)
Fustification of estimates for expenses applied scientific research, developmen including maintenance, rehabilitation, of facilities and equipment.	necessary for basic and t, test and evaluation,
or racilities and equipment.	

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY TABLE OF CONTENTS

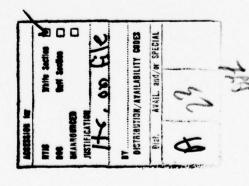
Control : Budget Annuald's Everyone	Page No.
Appropriation Language Program and Financing Schedules	4 2 8 8
Table of Contents. Introduction and Expianation of Contents. Summary by Research Activities (Program Category).	9 10 11
Details by Program Element Technology Base. Technology Base. Strategic Programs Tactical Programs Intelligence and Communications. Programwide Management and Support Detail by Program of Proposed FY 1977 Supplemental Estimates	12 14 16 16 21 23
Section 3: Performer Distribution	28
Section 4: Installation Analysis	53
Section 5: Analysis of Reimbursable Program	53
Section 6: P deral Contract Research Centers	99
Section 7: Major Improvement to and Construction of Government-Owned Facilities Punded by RDTE	89

DISTAIBUTION STATES
Approved for public
Distribution Us

TABLE OF CONTENTS

Page No.

	1	00
	•	
		*
	*	
	*	*
S		
e		
4		
=		
C.		
Fa		
77		
je		
3		
0		
nt		
Je		
3		
ē		
0		
9	•	
at		
-		*
10		
1		
nc		m.S
7		ra B
25		00
0		ŭ
0		-
0		0.
44	E	at
t d	80	7
Data for Construction at Government-Owned Facilities		ij
to d	by RDTE	Simulator Programs.
ct	U	+1
e	e e	50
10	un	
Ď.	144	140
ection 8		ection 9: F
E		E
74		71
Ö		C
(1)		(3)





11

Approved for public releases.

Distribution Unlimited

Budget Appendix Extract

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARM APPROPRIATION LANGUAGE

Section 1

and the said

For expenses necessary for basic and applied scientific research, development, test, and evaluation, including maintenance, rehabilitation, lease, and operation of facilities and equipment, as authorized by law; \$2,615,700,000, to remain available for obligation until September 30, 1979. (10 USC 2353, 4503; Department of Defense Appropriation Act, 1977; additional authorizing legislation to be proposed.)

-

	14000.00	AND FINANCING		(IN THUUSANDS OF DU	DOLLARSI				-
ion		О	UDGET PLAN	BUDGET PLAN (AMCUNIS FOR	E3)		OCLIGATION	IONS	
1116	IDENTIFICATION COUR 21-2040-0-1-051	1	0 <u>F</u> 0	1261	1978	1976	19 TO	1977	1976
		1976 ACTUAL	ACTUAL	ESTITATE	ESTIMATE	ACTUAL	ACTUAL	: !	
1								-	426.70
Y	יייניייי מו זכרוליייייי	2.0.0.0	84.596	388,752	420,801	338,233	211,110	149.000	140,000
	TECHNOLOGY DASE	243121	34.771	131,517	145,543	140.43	44.220	211,800	219,00
	ALLANCEL TECHNOLOGY DEVELOPENENT	142,000	50,108	203,256	215,541	190, 510	237.031	1,217,000	1,437,30
		926.025	544,599	1,188,724	1,431,104	201.406	2.822	13,800	17.00
	TACTICAL PRUGRAMS	11.495	3,275	12,988	17,583	11.430	81.569	395,906	403.0
		331,302	٠.	379,880	391,100				2 6 1 2 0 0
	FROCKAMAIDE MANAGETETT			305	. 2	1,906,103	470,340	2,365,500	270.000
	102010	1,970,399	509,450	280.003	300,000	240,791	66,100	164.662	
	REIMBURSAGLE (TOTAL)	262,030			:	2 4 . F. A04	536.440	2,687,000	2,913,000
			558,792	2,545,117	2,925,700				
10.00	יואר								
F	FINANCING		•	,	-297.5nD	-263,6-9	-53,774	-277,500	-297,500
	OFFSETTING CULLECTIONS	-272,670	-53,370	168.6-	-10,000	-13, 329	665 **-	-2.500	-2.5
11.00	TOUGHT FUNDS	-13,529	-723	-2,500	-2,500	-1,058	361-		
13.00		-1,024							
21.00	VAILABLE, START OF P	Exton				-87,166	-176,406	-205,004	-103,121
			:						
	PERPETURE FROM OR TO PRIOR YEAR	-7.36A	5,823	:	:	:			
	36 30 043	2100							
24.00	SE AVAILABLE, ENU UT SE PRIO DE PRIOR YEAR BUDGET				:	176,406	502,004	103,121	115,861
	PLENS SALLY					:	1,5+		
25.00	UNCELLIGATED BALANCE LAPSING, BUD PLAN		1,52			1 0	507.650		
	× 1000	1,958,0	507,654	2,295,220	2,615,700	1,953,000		:	
			7 2 2	2.200.616	2,615,700	1,955,008	507,658	2,280,816	2,015,700
00.04		1,958,008						1,528	:
101:3	SUPPLEMENTAL NOW REQUESTED FUR			1,528					
44.20	SUFPLEMENTAL NUM REQUESTED FOR		:	12,875				12, 670	
	CIVILIAN PAY RAISE	-	;					,	
-	_					1,868,708	590.565	7	814,699
00	CALIGATIONS INCORRECT MET					-590.565			
72.00						-4,102		•	
74.00	Calibated Calance, END C.						7. 7. 7.0 %	: "	2.470
27.00	ADJUSTRENTS IN EXPLAND	******				1,8-1,512	1000		
		COL CECETAL							0
90.06	DAMOS SAL MOST CONT.	PPLEFENIAL							

28.27	43838	CH. DEVELUE	MENT, TEST,	JESEAJOH, DEVALUPMENT, TEST, AND EVALUATION, ARMY	IION, ARMY				17 JAN: 77
Section		AN AND FINA	NCING CIN I	PRUGNAM AND FINANCING (IM THUUSANDS OF BOLLARS)	DULLARSI		197	1975 FISCAL YEAR PROGRAM	AR PROGRET
DENT	DENTIFICATION CODE 21-20-0-3-1-051		BUDGET FLA	BUDGET FLAN (AMUUNTS FOR	FCR MED)		08110	UBL ISATIONS	
		1976 ACTUAL	19 TQ ACTUAL	1977 ESTIMATE	1978 ESTIMATE	137 b ACTUAL	1970 ACTUAL	1977 ESTIMATE	1978 ESTIMATE
	PRODATE OF ACTIVITIES: LIRECT:								
	1. TECHNOLOGY BASE 2. ADVANCED TECHNOLOGY DEVELOPEMENT 3. STAFFELD PROGRAMS 4. TAGLICH PROGRAMS					3,695 5,092	359	369 11 217	
						305	13	13	
	TOTAL DIRECT REIMBURSABLE (TOTAL)					50,920 22,531	2,176	2,176	
10.00	10Tal					73,451	3,576	3,576	
11.000	FINANCINS: OFFSETTING CULLECTIONS FROM: FEDERAL FUNDS TRUST FUNDS NON-FEDERAL SOURCES NON-FEDERAL SOURCE AVAILABLE, START OF FEDER SUMPLETION OF FRIOR FEAR BUDGET	001236		71cu		9, 021	-396	-396 2 -29	
			:	-1,545		-87,166 -4,698	969.		
2.00		961	:			4.698			
9.60	ONGALIGATED GALANCE LAPSING BUD FLAN UNGBLIGATED BALANCE LAPSING, BUD FLAN			1,545		2,5+2	1,545	1,5+5	
	GULGET AUTHORITY		:				:		:

	oc.	RESEARCH. DEVELUPHENT, TEST, AND EVALUATION, ARMY	ENT, TEST,	AND EVALUAT	ION, ARMY				17 JAP. 77
4		PRUGGAM AND FINANCING (IN THOUSANDS OF DOLLARS)	CING (IN TH	JUSANDS DE	BOLLARSI		1976	1976 FISCAL YEAR PROGRAM	R PROCREM
Section	Section 1 (Contd)		BUGGET PLAN	BUDGET PLAN (AMUUNTS FOR ROT+E ACTIONS PROGNAMED)	60°		0BL 16AT 10NS	TIONS	
200		1970 ACTUAL	19 TQ ACTUAL	19 TQ 1977 TUAL ESTIMATE	1978 ESTINATE	197 o ACTUAL	19 TQ AGIUAL	1977 ESTIMATE	1978 ESTIMATE
	PROGRAM BY ACTIVITIES:								
	LIKECT: 1 TECHNOLOGY BASE 2 AUVANCEU TECHNOLOGY DEVELOFEMENT					136,742	3,021	5.844	
		- 5				880, 899	30,633	23,293	23, 293
	5. INTELLIGENCE AND COMMUNICATIONS 6. FROGRAMMIDE MANAGEMENT AND SUPPORT					311,672	10,300		
						1,855,183	35,700	53,552 28,160	
10.00		2,252,429				2,073,353	97,364	81,712	81,712
13.00	-	-272,670 -13,329 -1,054	-7,320 3	-7,320 3		-272,670	-7,320	7,320 3 -51	
	FOR COMPLETION OF PRIOR YEAR BUDGET FLANS REPROGRAMING FROM OR TO PRIOR YEAR ANGEL DIANG	-7,368			7,363	7,368	-171,708	-81,712	-81,712
24.0	24.00 UNCBLIGATEU BALANCE AVAILABLE, END OF PERIOD FOR COMPLETION OF PRIOR YEAR BUDGET PLANS SUCCET AUTHORITY	PERIOD 1,958,008				171,708	81,712	81,712	

ARMY	RESEA	CH, DEVELU	RESEARCH, DEVELUPMENT, TEST, AND EVALUATION, ARMY	AND EVALUA	TION, ARMY				
Section	Section 1 (Contd)	AM AND FIN	PROGRAM AND FINANCING (IN THOUSANDS OF DULLARS)	HOUSANDS OF	DULL 4RS)		٠	TV. C Trons.	17 JAP. //
DENT	COUE 21-2040-3-1-051		BUDGET FLA	BUDGET PLAN (AMUNIS FOR RUT+E ACTIONS PROGRAMED)	F CR MED.		CELI	CELIGATIONS	X 1
		1976 ACTUAL	1 9 TQ AC FUAL	1977 ESTIMATE	1978 ESTIMATE	1976 ACTUAL	19 TQ ACTUAL	1977 ESTIMATE	1978 ESTITATE
	URECT: URECT: 1. TECHNOLOGY BASE								
	2. ADVANCED TECHNOLOGY DEVELOPEMENT 3. STRAFEGIC PROGRAMS				34,771		18,449		16, 662
	5. INTELLIGENCE AND COMMUNICATIONS 6. PROGRAMMIDE MANAGEMENT AND SUPPORT		2 &	3,275	3,275 8,109		205,110	33,483	39,489 836
	TOTAL JIRECT AEIMOURSABLE (TOTAL)			509,458			.00.500	-	102,954
10.00	TUTAL		1		262,792		435,500	-	20,334
11.00 13.00 14.00 21.00	FIRANCING: UFSETING COLLECTIONS FROM: FRUST FUNDS NON-FEDERAL UNGBLIGHTED BALANCE AVAILABLE, START OF PERIOD FOR COMPLETION OF PRIOR FEAR BUGGET	001	-4,404		6-158 4-1404 672		-40,058	:::	
24.00	UNUBLICATED DALANCE AVAILABLE, END OF PERIOD FOR COMPLETION OF PRIOR YEAR BUDGET	100	go					-123,292	-123,292
	BUCGET AUTHURITY		::		507,658		123,292	123,292	

-	KESEAR	H. DEVELOPH	RESEARCH. DEVELUPMENT, TEST, AND EVALUATION, ARMY	AND EVALUAT	ION. AKMY				17 JAN 77
WK II		IM AND FINAN	FRUGRAM AND FINANCING (IN THOUSANDS OF CULLARS)	DUSANDS OF	JULLARS)		197	1977 FISCAL YEAR PRUGRAM	AR PROGRAM
Sect 10n	<u>Section I</u> (Conc.)		BUDGET PLAN (AMOUNTS FOR ROITE ACTIONS PROGRAMED)	PLAN (AMOUNTS FOR ACTIONS PROGRAMED)	ន គិ		081 167	OBL IGAT IONS	
TOENT		1976 ACTUAL	19TQ ACTUAL	1977 ESTIMATE	1978 ESTIMATE	1976 ACTUAL	19 TQ ACTUAL	1977 ESTIMATE	1978 ESTIMATE
	SOLDINITIES:								
	CINECTS			388, 752		:	:	372,903	15,019
	1. TECHNOLOGY SASE 2. ADVANCED TECHNOLOGY DEVELOPEMENT							126,834	7.043
				1,188,724				1,154,218	34,500
	4. TACITOH PROGRAMS 5. INTELLIGENCE AND COMMUNICATIONS			12,988				12,570	10,622
	6. FROGRAMMIDE MANAGEMENT AND SUFFURI							300	72.121
	TOTAL DIRECT	:		2,305,117				2,231,996	30,000
	KEIMBURSABLE (TOTAL)						•		
10.00	TOTAL	:	:	2,585,117				2,481,996	103,161
	I NOT THE PROPERTY OF THE PROP								
:	UFFSETTING COLLECTIONS FROM:			-277,500				-277,500	
13.00	TRUST FUNDS			768.6-				-2,500	
14.00	SOURCES	ERICO	:	00647-					
00.12	FOR COMPLETION OF PRIOR YEAR BUCKET								-103,121
24.00	PLANS UNCBLIGATED BALANCE AVAILA	100							
	FOR COMPLETION OF PRIOR							103,121	
	FLANS							200 200	
	BUCCET AUTHORITY			2,295,220				6,699,660	
9	SUBSET AUTHORITY:			2,280,816		2,280,815		2,280,815	2,280,816
44.10	SUPPLEMENTAL NOW REQUESTED FOR			1,528		1,528		1,528	1,528
44.20	SUPPLEMENTAL OF REQUESTED FUR CIVILIAN PAY RAISE			12,876			12,876	12,876	12,876

and yet are it is a little to the second

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY PROGRAM AND FINANCING (IN THOUSANDS DF DOLLARS) BUDGET PLAN (AMUUNIS FOR ROLLARS) 1978 FISCAL YEAR PROGRAM 0911 1978 1976 1977 1978 1978 1976 1977 1977

-
Σ
ARM
-
•
•
Z
2
3
-
_
d
-
-
-
EVALUATION,
>
w
-
-
NY
Z
7
-
Van.
-
S
1651
=
_
-
,
~.
w
DEVEL CPMENT,
a
0
٠.
-
w
-
144
5
-
T
13
=
K
1
W
RESEARCH.
14.1
-

DATE CLASSFIGATION (IN THOUSANDS JE DULLARS) 1976 40104 1976 40104 88045 88045 88045 10,131 10,132 10,133 1	AKHY	RESEARCH, DEVELCPMENT, TEST, AND EVALUATION, ARM,				יו יושר יו
	Section	OBJECT CLASSIFICATION (IN THOUSANDS OF				
THE PROJUCTION OF PERSONNEL COMPENSATION	IDENT	21-2040-0-1-051	1376 ACTUAL	19 TQ ACTUAL	1977 ESTIMATE	1978 ESTIMATE
TUTEL PERSONNEL CUMPENSATION PERSONNEL COPPENSATION FRANSONNEL CONFENSATION FRANSONNEL CONFENSATION FRANSONNEL CONFENSATION FRANSONNEL CONFENSATION FRANSONNEL CONFENSATION FRANSONNEL AND TRANSPORTATION OF PERSONN FRENT, COMMUNICATIONS, AND UTLITIES TOTAL COMMUNICATIONS FRENT, COMMUNICATIONS FRANSONNEL SERVETS TOTAL CONFENSATION FRENCONNEL SERVETS TOTAL CELEBATIONS FRENCONNEL STORM FRENCONNEL STO	75.5	FERSCHAEL COMPENSATION: FERMARENT POSITIONS POSITIONS OTHER THAN PERMANENT CITHER PERSCHAEL COMPENSATION	277,134	71,241	288,635	289,990 4,80b 1,022
PERSONNEL CONFESSION FERSANNEL		•	282, 904	72,767	294,464	295,620
RELIGUAGE OF PROUNCE ILLUS. PRINTING AND MERRIALS CONTRACTS SUPPLIES AND MATERIALS CONTRACTS SUPPLIES AND MATERIALS CONTRACTS SUPPLIES AND MATERIALS CONTRACTS SUPPLIES AND MATERIALS FRENCHEL AND THERE TO CONTRACT TOTAL NUMBER OF PERMANENT POSITIONS TOTAL NUMBER OF PERMANENT POSITIONS FULL TIME SULVATIONS TOTAL NUMBER OF PERMANENT POSITIONS FULL TIME SULVATIONS F		PECT COLIGATIONS: PERSONNEL COMPENSATION FERSONNEL GENETIS: CIVILIAN FERSONNEL AND TRANSPORTATION OF PERSONS TRANSPORTATION OF PERSONS	240,187 21,011 19,257 5,597	62,035 5,519 4,244 1,961	251,135 23,349 24,046 6,135	254,444 23,634 25,000 7,843
CONTRACTS CONTRA	23.0	UTILITIES UNS, AND UTILITIE	14,103	3,751	20,161	20,631
FEIRGURSABLE CONFENSATIONS FERSCENEL CONFENSATION FERSCENEL CONFENSATION FERSCENEL CONFENSATION FERSCENEL CONFENSATION FERSCENEL SENETIS: CIVILIAN FERSCENE	25.6.0	CTHEN SERVICES: CONTRACTS CINER SUPPLIES AND NATERIALS EQUIPMENT TOTAL DIRECT OBLIGATIONS		368,437 13,095 10,328 470,340	1,954,807 49,842 52,093 2,388,506	2,164,423 56,495 56,151 2,643,000
FERNOLIS AND UTILITIES OTHER RENT, COMMUNICATIONS, AND UTILITIES OTHER RENT, COMMUNICATIONS, AND UTILITIES OTHER RENT, COMMUNICATIONS, AND UTILITIES FRINING AND REPRODUCTION OTHER 12,000 155,794 12,000 10,552 EQUIPMENT TOTAL METRIALS EQUIPMENT TOTAL NUMBER OF PERMANENT POSITIONS PULL-THE EQUIVALENT OF OTHER POSITIONS AVERAGE BY DEPRICAMENT AVERAGE OF GRADE AVERAGE OF SALARY AVERAGE OF SALARY STATEMENT OF OTHER POSITIONS AVERAGE OF SALARY AVERAGE OF SALARY STATEMENT STA		ILIAN ON OF	42,717 4,125 4,547	10,732 9+7 1,349	43,329 4,514 5,842 704	41.37c
SUPPLIES AND MATERIALS SUPPLIES AND MATERIALS EQUIPMENT TOTAL METHORISAGLE JOLIGATIONS TOTAL JOLIGATIONS PULL-THE ROUNDERS OF PERMANENT POSITIONS PULL-THE ROUNDERS OF PERMANENT POSITIONS AVERAGE BAID REPLEMENT AVERAGE OF GRADE AVERAGE OF GRADE AVERAGE OF SALARY STATEMENT AVERAGE OF SALARY STATEMENT STATEMENT 14,737 AVERAGE OF GRADE STATEMENT ST	23.0	LITIES And UTILITIE	3,921	97.0		4,507
TOTAL REIMBURSABLE JALIGATIONS TOTAL JELIGATIONS TOTAL NUMBER OF PERVANENT POSITIONS FULL-TIME EQUIVALENT OF OTHER POSITIONS AVERAGE PAID EXELOMENT AVERAGE SALDE AVERAGE OS GRADE AVERAGE OS GRADE STANDARD OF THE POSITIONS 15,150 9 51 AVERAGE OS SALDE \$13,400 \$13,605	35.6	JTHEM SUPPLIES AND MATERIALS EQUIPMENT	12,088	43,150 4,066 4,621	209, 847 11, 532 17, 901	184,970 10,760 18,2cc
NT POSITIONS OTHER POSITIONS OTHER POSITIONS	99.0	31.16		66,100	2,687,000	2.913.000
		NT POSITIONS OTHER POSITIONS DED POSITIONS	14,737 732 15,150 9,51 \$19,040 \$13,625		14,652 595 15,027 9.51 \$20,073 \$14,946	14,647 595 14,999 9.51 \$20,125 \$16,129

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY PROGRAM ELEMENT LISTING TABLE OF CONTENTS

Section 2

ogram Category) lognam Category) lognam category logna	1. Introduction and Explanation of Contents Summaries by: 1. Research Activities (Program Category) 2. Budget Activities. 1. Technology Base. 2. Advanced Technology Development 3. Strategic Programs 4. Tactical Programs 5. Intelligence and Communications 6. Programwide Management and Support 7. Betail by Program of Pronoged FV 1977 Sumplemental Estimates
ation of Contents	ttion and Expl Activities (Activities Activities By Base I Technology D to Programs The Programs The Amagemen of Proposers
ation of Contents	Introduction and Explanation of Contents ries by: Research Activities (Program Category) Budget Activities

Section 2 (Contd)

INTRODUCTION AND EXPLANATION OF CONTENTS PROGRAM ELEMENT LISTING

The listing is preceded by two summaries: the first by Research Activities This section has been prepared for the purpose of providing summary program element budget information concerning the US Army Research, Development, Test, and Evaluation Program. (Program Category), the second by Budget Activities.

A separate document, Descriptive Summaries, furnishes detail by project. In addition, it furnishes narrative information on all RDTE program elements and projects of \$3.0 million or more. The index number in the right-hand column of this Program Element Listing refers to the appropriate page in the Descriptive Summaries. The funding information used in these volumes corresponds to that contained in the President's Budget. A direct comparison of FY 1976, FY 1970, and FY 1977 data in this Program Element Listing with data shown in the Program Element Listing dated January 1976 will reveal significant differences. Many of the differences are attributable to the following

- A FY 1976 increase of \$4.691 million representing additional recoupments from RDTE surcharges on Foreign Military Sales and transfer of reimbursements from prior years.
- A FY 1977 net reduction of \$81.1 million resulting from the following:
- Congressional reduction 33

4

- Proposed supplemental for
 - civilian pay raises
- +14.4 million

\$-95.5 million

- Reclassification to provide greater visibility and contribute to the effective management of the RDTE program such as c. Reclas the following:
- The Medical RDTE Program
- Combat Support Munitions
- Field Artillery Weapons Ammunition Development 56636
 - Mobility Equipment Technology
- Further extension of the Single Program Element Funding Concept.
- Restructuring of the FY 1976, FY 19TQ, and FY 1977 programs for comparability to the FY 1978 program structure.
- e. Planned RDTE effort to be accomplished at installations operating under the Army Industrial Fund (AIF) will require supplemental funds to cover civilian pay raises included in AIF stabilized rates.

TOTAL RESEARCH DEVELOPMENT TEST + EVAL, ARMY

	FY 1978 R 0 T + E PROGRAM	AH			
פברנים ל (כייים)	SJAMARY		DATE 1 03	DATE: 03 JAN 1977	
			THOUS ANDS OF	DF DOLLARS	
	FY 1976	FY 19 TQ	FY 1977	FY 1978	FY 1979
	!				
SUMMARY RECAP OF RESEARCH CATEGORIES					
	80.746	20,245	97,884	10 3, 531	117,184
RESEACH	268.824	68,351	290,868	31 7,270	330,912
CAPLURATORY DEVELOPMENT	468,517	11.3,775	469,900	586,234	956.560
ACCASCED DEVELOPMENT	702,420	196,617	965,897	1,097,633	438.003
TO COLOR TO	332,301	87,830	361,104		
		8 2 8 3 8 7	2.205.733	2,50 3,685	2,712,269
RESEARCH AND LEVEL DEMENT (FYLIP PROGRAM 6)	1,852,814	22.540	99,384	12 2, 015	118,358
	111,303	200			
TOTAL RESEARCH DEVELOPMENT TEST + EVAL, ARMY	1,970,399	509,458	2,305,117	2,625,700	2,830,627
SUMMARY RECAP OF BUCGET ACTIVITIES			200 753	420.401	660.844
	349.570	88,536	369,132	1001034	226.383
	145,607	34, 771	151,517	24 6, 541	244.435
ACCEPT FECTIVE CONTRACTOR CONTRAC	197,000	50,108	203,230	1, 431.154	1.459.276
CENTRO SECURITION OF SECURITIO	935,025	244,599	1,100,124	17.683	14,694
NOTING THE PROPERTY OF THE PRO	11,895	3,275	179 480	197.958	437,740
CONTRACTOR MANAGEMENT AND SUPPORT	331,302	601103	20016		-
TOTAL RESEARCH DEVELOPMENT TEST + EVAL, ARMY	1,970,399	864,605	2,305,117	2,625,700	2,830,627
SHARADON GOTA P. GALTO VORANIO					
	102.834	17.970	84,377	90.818	86,100
LENERAL PURPOSE FORCES	15.551	4.610	15,007	31,197	32,258
INTELLIGENCE AND COMMUNICATIONS DESTABLY AND DEVELOPMENT (FYOP PROGRAM 6)	1,852,814	486,878	2,205,733	2,503,685	2,712,269
	002 920 ,	509.458	2,305,117	2,625,700	2,830,627
TOTAL RESEARCH DEVELOPMENT TEST + EVAL, ARMY	14.21.01.23				

DEFARTMENT OF THE ARMY FY 1978 R D T + E PROGRAM

52 07 22 0 53 3 1 2

7.

DESCRIPTIVE SUMMARY PACE NUMBER 209 218 160 212 215 230 246 546 171 185 193 201 206 221 233 237 254 164 168 174 188 2,417 U 6,463 U 0 260.8 717 0 2.000 U 3,000 ∪ 12,002 U 7.074 0 16,154 U 2,211 U 6,622 U 4.819 U 6,723 U 3,290 U 4,250 U 0 685.5 5.027 U 10,249 U 3,934 0 3,203 0 6781 YA 8,062 3,559 2.000 2,300 3,186 462.9 1,500 9,926 15,530 3,120 8,428 2,026 FY 1978 4.855 4,957 3,450 6,541 657 THOUSANDS OF BULLARS 4.077 505.5 10,350 EXHIBIT 8-1 DATE : 03 JAN 1977 FY 1977 3,876 2,406 9,725 2,880 1,000 2,500 2,730 5,032 1,500 8.914 240.9 14,093 3,040 7,305 1,838 2,375 2,812 12,120 747 3,463 2,080 1,635 3,242 1,759 FY 19TQ 1,086 1,135 245 423 137 1,150 285 918 2,937 551 855 100 727 1,907 5,489 5,459 FY 1976 8,880 2,530 4,625 8,813 12,887 6,943 1,581 3,715 11,804 202 3,106 2,572 2,920 545 6000 4 4 2,354 00 % 101 AFFLURIATION: 2046 A RESERVON DEVELUPMENT 1851 + EVAL. ARMY MEDICAL TECH FUR DEF AGAINST CHEMICAL AGENTS DESIGN CONSTRUCTION FOR MILITARY FACILITIES CONSTRUCTION OFS TECH FUR COLD REGIONS DE7154 TACTICAL SELF FROTECTIVE EN TECHNOLOGY HELIGUPTER SCHOAT GREM ABN HEDIGINE MIL PSYCHIATOR AND MICROMANE INJURY TACTICAL ELECTRONIC MARFARE (EM) COMPUTER AND INFORMATION SCIENCE HIL CONSTRUCTION AND ENGR TECH COMPUTER AIDED DESTUN-ENGR (4) TEL INFECT DISEASE TECHNOLOGY HUBILITY EQUIPMENT TECHNOLOST CLUTHING/EQUIP/PACKAGING TECH HUMAN FACTORS IN MIL SYSTEMS ARMY PERSONNEL MANFONER TECH VON-SYSTEM TRAINING DEVICES ITEM NOMENCLATURE ENVIRONMENTAL QUALITY TECH ARMY SUFFICE CARPA, HOMES REV SUPPORTING TECHNOLDSY ARMY TAXINING TECHNOLOGY HILITAKY BURN TECHNOLOGY RECOVERY FROM INJURY FOOD TECHNOLOGY Section 2 (Contd) 527714 457730 527324 521124 027214 527254 527364 527334 427734 LINE ELEMENT 527232 0272+1 027274 527314 227344 527+54 D27174 527224 027224 327254 627154 527134

20 3.5 * 35 30

3.7

All the training of the

3.0 33 .5 ; ; *

SEPARIMENT OF THE ARMY FY 1978 & S T + E PROCRAM

Sections	Section 2 (Contd)		T 1978 3	SEPARIMENT OF THE ASSY FY 1978 & 3 T + E PROURAM	=	Š	EAHISII 4-1		
4	APPROPRIATION:	: 2.+0 + RESEARCH DEVELOPMENT IEST + EVAL, ARMY	44.44			34 TE : 03	DATE : 03 JAN 1977		
						THOUSANDS OF DOLL ARS	OUSANDS OF BOLL ARS	u	
I S	LINE CLETENT	ITEM NOMENCLATURE	A CT	FY 1376	FY 1970	FY 1977	FY 1978	61	DESCRIPTIVE SUPMARY PAGE NUMBER
;	0.7754	COMBAT MAXILLUFACIAL INJURY	-	856	241	1.048	1,155	1,260 0	260
•	₹921750	ME. LEF HOAT ST STOLUGICAL AGENTS	1	6.359	1,600	6,657	7,663	7,564 U	263
;	0.1774	MILITARY ENVIRONMENTAL STRESS		2.092	929	2,287	2,521	2,752 U	266
00	2.77.84	COMBAT RELIGIEL MATERIEL	-	1.103	293	1.272	1.402	1,531 U	569
16	2-1794		-	352	112	450	505	n 35 n	272
	1EC+NO	156110101 0186		349,570	88,596	388,752	420,801	660.877	
25	031022	HATENIALS SCALE UF	63	956	005	1,235	2,382	4.502 U	275
53	031034	FLUILIGS	2					0 00 S	278
	032013	ATRORAFI FOARR FLANTS AND PROPULSION	2	1.077	515	3,857	4,057	10,000 0	280
5.0	0 3200-	AIRCAFT REATONS	2	4,369	1,100	1,717	0 * 6	4,501 0	268
50	0 5 2 3 7 4	AIRCRAFT AVIONICS EQUIPMENT	2	2.682	300	2, 139	2,560	3,194 U	291
5.7	0.52384	AIRCHAFT SURVIVABILITY	2	2.550	330	2,383	1,453	4.750 U	296
5.6	0.32:32	AIR AUSILITY SUPPORT	2	5,273	909	2.700	3,053	5,979 U	589
2.	032114		2	5.282	1,915	6,328	2,808	6.000 0	303
0	532124	TILT AUTHA RESEARCH AIRCHAFT	2	3,315	006	2,574	971	0 006	310
10	0.52134	ROLL SYSTEMS RESEARCH AIRCRAFT (H)	2	4.606				3	
95	0.350A	003504 TERMINAL HUMING SYSTEMS	2	3,365	2.2	3,300	4,841	10,500 0	314
93	03313A	MSLYKUCKET JUNIONENIS	2	8,136	0.55	769.4	4,210	0 005.6	317
	€3314	HI-ENGROT LASER COMPONENTS	2	26,030	8,200	21.303	13,749	20,975 U	325
60	035024	AGYANGEL LAND MOS SYSTEMS CONCEPTS	2			3.200	4.8.1	7.000 0	335
0	630343	NUCLEAR MUNITICAS AND RACIADS	2						338
10	465656	LANJMING MARFARE	2	4,500	1,297	3.2.0	4.408	3.877 ∪	341
0	035374	MANY SMALL BANS PALGRAN	2	896.1	2,441	2,718	569	3.452 ∪	344

DEFARINENT OF THE ARMY FY 1978 R D T + E PROGRAM

EXHIBIT 8-1

DESCRIPTIVE SUMMARY PAGE NUMBER 416 428 414 421 454 364 379 384 387 390 392 394 399 405 804 369 371 359 348 354 356 351 005.4 2,145 U 9,951 ∪ 10.500 0 7.600 U 0 005 ° 5 1,400 0 1,678 U 9,953 ∪ 6,838 ∪ 5,984 U 1,500 0 16,289 ∪ 154 0 1,043 0 4.886 ∪ 0 995 € 4.617 U FY 1979 106 1,409 2,575 2,624 5,150 1,137 1,227 8,420 1,355 9,611 5.652 6,437 16 THOUSANDS OF DULL ARS 4,729 3,310 4,631 457 6,243 581 12,951 4.791 852 618 FY 1978 2,888 5.50+ 5,692 3,531 88 200 1,257 5,063 7,397 1,703 1,403 13,430 1,500 2,207 3,944 2,118 3,997 332 855 FY 1977 1,898 387 2,090 159 20 5 2 2,030 1,190 2,600 53 720 FY 19TQ 1,454 455 450 830 407 4.159 1,999 8,353 11,375 2,336 81 3,840 FY 1976 1,270 200 4.779 111 4,911 3,418 12,000 2 2 2 101 2 2 2 2 APPRILLA STILLS 24-0 - RESERREN DEVELLANENT TEST + EVAL. AKHT 2 2 N SIDELGIUAL DEFENSE MATERIEL CONCEPTS INCAPACITATING CHEMICAL HUN CONCEPTS METECALLUSIS EQUIPMENT DEVELOPMENT 03742A ADVANCEL ELECTRONIC DEVICES DVLP41 CHETLUAL DEFENSE NATERIEL CONCEPTS LETHAL LHEYICAL MUNITIONS GOVCEPTS NIGHT WISION ACVANCED DEVELOPMENT THE E UTILIZATION IN ALL SYSTEMS REMUTELY POMERED VEHICLES/DRONES MIL PERS PERFURMANCE DEVELOPMENT ENVIRON ENTAL GUALITY CVIRL EQ COMPAT RELIDAL MATERIAL (ADV) NOW-STRIET FLATINING DEVICES ITEM NUMENCLATURE VEHICLE ENSINE DEVELOPMENT SPECIAL FURNUSE DETECTORS COUNTER-INE AND BARRIERS NOTITION AND ARRENTITION ELECTRIC POMER SOUNCES AUVANCEL FUZE LESTON COMMAND AND CONTROL ADPE CEVELDAMENTS IFF DEVELOPMENTS -0314111 Section 2 (Contd) 03725A 637334 037234 537324 637334 =37+12 037104 261700 037211 037314 037354 037254 LINE ELETENT \$20159 037134 251050 0000214 035244 261660 24.000 00010-----* 99 68 06 99 0 20 1 8 95 83 83 52 10 11 18 62 13 1 1 11 22

PRJGRAM
- t
178 8 J
1 1978

Secti	Section 2 (Contd)		DEPARTME 1978 R	DEPARTMENT OF THE ARTY FY 1978 R D I + L PROGRAM	5	EX	EXHIBIT R-1		
		A - IAAR + ISAR Industry of the IAAR	KAY			CATE: 03	CATE: 03 JAN 1977		
4	APPACIAL AIN COLOR	TOTAL TOTAL COLUMN COLU				THUUSANDS OF UCLLARS	OF UCLLARS		
			•					9	DESCRIPTIVE SUPPLARY
i i	ELEMENI NUMBER	ITEM NOMENCLATURE	A CT	FY 1976	FY 19TQ	FY 1977	1978	2 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	PAGE NUMBER
6	A 176.6 A	IMPLYO SOUSSI WAS A SECOND	2	485	9.5	300	485	0 005	431
2 2		INSUIT TREETINGS TO SE	2	1,276	231	1,241	1,990	3,932 U	757
2	1000	SOCIETY SOCIETY AND IN	2	2,470	986	1,193	2,734	4.602 U	437
*	* * * * * * * * * * * * * * * * * * * *		2				3,389	7.000 0	07
45	637534	CEET DASING TECHNOLOGY							442
96	057163	JULIAT US CONTACT PUTAT AND TEST	2						
	43444	ADVANCED TECHNICIOSY DEVELORIENT		145,607	34,771	131,517	142,543	565 4977	
16	41014	ASSOCIATION OF THE PROPERTY OF	10	97,000	25,158	102,734	107,297	121.519 U	577
: ;			ъ	100,633	24,900	100.072	107.688	122,000 U	450
2					9.0	450	955	916 U	453
44	037354	MANGOS ARCHITECTURE	,			36 7 00	215.541	244.435	
	STRAT	STRATEGIC PROGRAMS		197.338	20.140	0031603			
	******	(F) 6919001 197 191 - X7V07	,	605.9				3	
3		43×4	,	3,055	525	263	24.206	50.836 0	562
101			,	1,030	230	5.060	30,113	24.000 0	999
162		אטריינייטעאי אטר אטרייניאט א		1.359	335	664		3	
103	023074			660.91	0.000	36.303	29.615	54,186 U	172
10,	023114						2.09	10.000 0	577
105	033154	MELISOR OF MSL GUIDANDE TECHNOLOGY	,				57 2 .	11.610 u	580
100	053171	GPASS SCAUE	,	6.000	2,000	164.6	664 6		188
107	0 3318-	AAAT-NAUT AA:B SAN	3			1.500	3, 2, 3, 2		
1.3	0.3194	CONVENTIONAL AIRFIELD ATTACK MISSILE	,				2,968	11,000 0	784
103		AUT AUTUALTIC CANNON (A)	,	2.900	200				
110	030124	ACCenter Autimaterial vissing	,				1,936		100
111			,	0+9		1,200	11.232	23,403 0	290

DEPARTMENT OF THE ARMY FF 1978 R D T + E PROSRAM

Section 2 (Contd)

EXHIBIT R-1

STATE STAT	1	1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0					THOUSANDS OF	F JOLL ARS	1	DESCRIPTIVE
3.357.4 CORREST SERVICE LA LANGE TO LATER TO	LING	ALENENT NUNSER	MOMENCLA	ACT	FY 1976	FY 19TQ	FY. 1977	J. 1	FY 1979 G	SUMMARY PAGE NUMBER
33.27.4 COMEST SUPPORT MONITONS 4 C.200 1.000 3.740 9.577 2.247 0 35.00.4 FILL ATTLICENT FANCE I AND SEW STATES 4.0016 1.000 3.740 9.679 1.1557 0 35.00.4 STREET ATTLICENT FANCE STATES 4.0016 1.003 3.740 5.287 9.690 0 35.00.4 STREET ATTLICENT FANCE STATES 1.003 1.003 3.775 5.287 9.690 0 35.70.4 ADMITTEMACE STATES 1.003 1.003 3.775 3.775 9.690 0 35.70.4 ADMITTEMACE STATES 1.003 1.003 1.003 3.746 5.275 0 0 35.70.4 ADMITTEMACE STATES 1.003	N	035254	ARMUNEU GAVALRY VENTOLE	7	1,541	301	3,970	174		284
State Stat	12	535274	CONSAT SUPPORT MUNITIONS	1	2,260	1,010	1,863	2,374		969
1,430 1,43	*	036284	**	3	4,018	210	3,745	6.679		888
9379A FMANICAL SCORTIA 1,939 1,926 1,926 1,926 1,926 1,926 9,600 9,600 0 9370A COMMUNICATIONS DEFICIENTY EMERGING 4 1,926 1,926 1,936 5,126 9,600 0 9371A MOTICAL SELECTATIONS DEFICIENTY 4 300 736 7,104 1,1072 2,179 0 9371B FAULUCAL SELECTATIONS SYSTEM (105) 4 4,130 736 3,148 6,777 11,1939 0 9372B MOTICAL SELECTATIONS SYSTEM (105) 4 4,130 736 7,104 11,1939 0 9372B MOTICAL SELECTATIONS SYSTEM (105) 4 4,130 7,104 11,107 11,103 0 9372B MOTICAL SELECTATIONS SYSTEM (105) 4 1,230 1,105 1,107 11,103 1,104 1,104 1,104 1,104 1,104 1,104 1,104 1,104 1,104 1,104 1,104 1,104 1,104 1,104 1,104 1,104 1,104 </td <td>115</td> <td>037844</td> <td>UNATTENCED SECOND SENSORS</td> <td>J</td> <td>3,800</td> <td>1,400</td> <td>3,050</td> <td>5,891</td> <td></td> <td>909</td>	115	037844	UNATTENCED SECOND SENSORS	J	3,800	1,400	3,050	5,891		909
9.77.24 COMMUNICATIONS DEFINISHED BY THE SALES 1.528 1.633 3.795 5.236 9.600 U 9.37.12.4 TACTICLAL SELF FADECINE EM EQUIP 4 1.528 1.93 1.97 2.279 0 9.37.12.4 TACTICLAL SELF FADECINE EM EQUIP 4 4.530 7.36 3.493 6.777 11.939 0 9.37.24 TACTICLAL DEFAMILITY SCHOLD STRIKE TOWN TOWN TOWN TOWN TOWN TOWN TOWN TOWN	110	037054	PHYSICAL SECURITY	t	1,999			485		613
637131 TACTICAL SELF FADICIANS EN FADILY 330 199 817 1.072 2.279 U 637121 HAPPING AND GEOGEST 4,130 736 3.463 6,777 11.939 U 537124 HAPPING AND GEOGEST 4,130 736 3.463 6,777 11.939 U 53724 TACTICAL UPPRATICATIONS SYSTEM (105) 4,151 1,512 3.491 11.132 11.132 53724 TACTICAL SURVEILLANCE SYSTEM (105) 4,151 1,512 3.491 11.127 11.132 0.777 11.132 0.702 <td>111</td> <td>D3707A</td> <td>COMMUNICATIONS DEVELUPHENT</td> <td>,</td> <td>1,528</td> <td>1,603</td> <td>3,795</td> <td>5,236</td> <td></td> <td>919</td>	111	D3707A	COMMUNICATIONS DEVELUPHENT	,	1,528	1,603	3,795	5,236		919
0.3712A AMPRING AND GEOGEST 4 300 198 617 1:072 2:279 0 0.3712A AMPRING AND GEOGEST 4 4.300 736 3:403 6:777 11:939 0 0.3722A TACHICLAL UPERALITYSDUAL HISTORY (105) 4 4.30 7:36 3:403 11:476 11:	118	637114	T III	,						623
0.3728A TANDER SALITANS SUSCIPILITATIONS SYSTEM (TOS) 4,300 736 3,463 6,777 11,939 U 0.3728A TANDER LUBERATIONS SYSTEM (TOS) 4,617 1,512 3,540 3,464 10,429 U 0.3728A TANDER LUBERATIONS SYSTEM (TOS) 4,617 1,512 3,540 10,429 U 0.3728A TANDER LUBERATE SYSTEM 4,617 1,230 23,500 3,431 5,042 U 0.3728A ANTICHLAL SIN SELESCOND CONTEM HEASURES 4 1,230 23,500 3,431 5,042 U 0.3740A ANTICHLAL SIN SELESCOND CONTEM HEASURES 4 1,240 4,40 5,040 0 0.3740A ANTICHLAL SIN SELECTOR CONTEM HEASURES 4 1,240 4,40 5,040 1,459 0 0.4231A ANTICHLAL SIN SELECTOR CONTEM HEAVER SIN SIN SELECTOR CONTEM HEAVER SIN SIN SELECTOR CONTEM HEAVER SIN	113	637124	HAPPING AND GEODEST	,	330	198	817	1,072		979
537284 TACTICAL UPBRATIONS SYSTEM (TOS) 4,4,300 706 3,468 6,777 11,939 U 537264 COMPART SUPPRINTEDUTFRIT 4,4,617 1,512 3,540 3,464 10,429 U 537264 TACTICAL SURVEILLANCE SYSTEM 4,617 1,520 7,014 11,274 11,162 U 537364 ANTICHALIZITIAN YSL COUNTER YEASURES 4 1,230 2,550 3,401 5,000 U 537454 ANTICHALIZITIAN YSL COUNTER YEASURES 4 1,240 4,00 4,65 5,000 U 537454 ANTICHALIZITIAN YSL COUNTER YEASURES 4 1,240 4,00 4,65 5,000 U 537454 ANTICHALIZITIAN YSL COUNTER YEASURES 4 1,240 3,460 1,452 0,000 U 64231A ANTICHALIZITY SUPPRINT 4 4,765 2,665 3,467 4,456 6,462 1,456 1,456 1,456 1,456 1,456 1,456 1,456 1,456 1,456 1,456 1,456 1,456 1,456 1,456 1,456 1,456 <	150	537134	EA VOLNERABILITY SUBJECTIBLITY	,						630
937264 COUNTER SOURCES 4,617 1,512 3,540 3,540 10,429 U 0.37324 TACTICAL SUPPRITE BUILDING SYSTEM 4 5,550 1,650 7,014 11,774 11,102 U 0.37324 ANTICHALIATION MARCARE SYSTEM 4 1,290 235 2,500 3,431 5,042 U 0.37434 ANTICHALIATION MARCARE SYSTEM 4 1,290 4,40 3,950 11,326 14,592 U 0.37434 ANTICHALIATION MARCARE SYSTEM 4 1,240 4,40 3,950 11,326 14,592 U 0.42034 ANTICHAL SELECTAVIOLIS 4 5,388 1,045 3,817 4,876 6,801 U 0.42034 ARETAL JOUGH 4,705 2,665 3,925 15,766 10,723 U 0.42034 ARETAL JOUGH 4 7,89 1,475 6,482 7,515 6,926 U 0.42034 ARETAL JOUGH 4 73,93 1,475 6,482 7,515 6,926 U 0.42034 ARETAL JOUGH 4 73,93 <td>121</td> <td>637224</td> <td>TACTICAL UPERATIONS SYSTEM (TOS)</td> <td>,</td> <td>4.300</td> <td>206</td> <td>3,483</td> <td>6,777</td> <td>11,939 U</td> <td>079</td>	121	637224	TACTICAL UPERATIONS SYSTEM (TOS)	,	4.300	206	3,483	6,777	11,939 U	079
03731A TACTICAL SURFILLANCE SYSTEM 4 5.550 1.630 7.014 1.1274 11.162 U 03737A ANTI-CALIMITAL NEL COUNTER MEASURES 4 1.200 235 2.500 3.401 5.002 U 03740A UNISTEAL ALIE ARE NEEDED DONTRY 4 1.200 4.46 5.00 4.85 5.00 U 03740A UNISTEAL ALIE ARE NEEDED DONTRY 4 1.200 4.40 3.950 11.326 14.582 U 03740A SINUGARS-V 4 1.200 4.40 3.950 11.326 14.582 U 04201A ANGRAFIT MEADONT 4 6.358 1.055 3.917 4.607 6.801 U 04203A AREMAN MEMBER THAN SUPPLY NEW 4 4.765 3.925 15.756 10.723 U 04203A AREMAN MEMBER THAN M	122	637254	COMBAT SUPPORT EQUIPMENT	,	4.817	1,512	3,540	3,454		979
0.5774A ANTITYALIATION YEL COUNTER YEASURES 4 1,230 2,500 3,431 5,042 U 0.3740A LIVISIULAL AIR DEFLISE-DHO DONTR 4 1,240 440 3,950 11,328 500 U 0.3740A TACITUCAL ELECTRANIC ARFARE SYS 4 1,240 440 3,950 11,328 14,592 U 0.3740A SINCDARS-4 4 5,388 1,065 3,925 15,766 6,801 U 0.4232A AIRCRART MEALONS 4 7,09 130 0.4233A AERIAL DOUJ 4 7,09 1,475 6,462 7,515 6,928 U 0.4233A AIR HOBILITY SUPPORTER 4 93,672 16,650 75,450 34,837 2,985 U 0.4233A AIR HOBILITY SUPPORTER 4 93,672 16,650 75,450 34,837 2,985 U 0.4203A AIR HOBILITY SUPPORTER 4 73,930 17,878 130,843 200,000 178,543 U	•	037364		,	5,550	1,850	7,014	11,274		651
0.3745a Indirecting the control of t	3	037374	ANTI-RALIATION 45L COUNTER 4EASURES	,	1,200	205	2,500	3.401		459
0.3745A TACTICAL ELECTRUMIC ARREAGE SYS 0.3745A SINCGARS-4 0.4231A ARRCARAFI WEARDANS 0.4231A ARRCARAFI WEARDANS 0.4231A ARRCARAFI WEARDANS 0.4233A ARRIAL SCOUT 0.4203A ARRCARAFI WEARDANT 0.4203A ARRCARAFI WEARDANT 0.4203A ARRCARAFI SURVINES CONTAS) 0.4203A ARRCARAFI SURVINES CONTAS) 0.4203A ARRCARAFI SURVINES LITTOR WELICOPTER 0.4203A ARRCARAFI SURVINES LITTOR WELICOPTER 0.4503A ARRCARAFI SURVINES LITTOR WELICOPTER 0.4504B ARRCARAFI SURVINES LITTOR WELICOPTER 0.4504B ARRCARAFI SURVINES LITTOR WELICOPTER 0.4505A ARRCARAFI SURVINES LITTOR WELICOPTER 0.4506B ARRCARAFI SURVINES LITTOR WELICOPTER 0.4506B ARRCARAFI SURVINES LITTOR WELLOOPTER 0.4506B ARRCARAFI SURVINES LITTOR WELLOOPTER 0.4	5	037404	DIVISIONAL AIR DEFENSE-ONG CONTR	,			200	4.85		657
0.3746A SINUGARS-V 4 1,240 4+0 3,950 11,328 14,592 U 64231A AIRCRAFT AVICALDS 4 5,388 1,035 3,925 15,766 10,723 U 04232A AIRCRAFT ARCHARL SCOUT 4 4,765 2,665 3,925 15,766 10,723 U 04203A AEMIAL SCOUT 4 7,79 130 6,482 7,515 6,928 U 04203A AIRCRAFT SURFILEY 4 93,672 18,658 75,456 34,837 2,985 U 04207A ADVA, GEL ATTICK MELICOPTER 4 73,930 17,878 130,843 200,000 178,543 U 04203A AIRCRAFT SURFILEY 4 73,930 4,659 5,319 4,659 5,319 9,659 5,180 U	0	037454	FARE	,						099
642314 AIRCRARFI AVIONIUS 4 5,388 1,055 3,925 15,766 6,801 U 042324 AIRCRARFI MEADAILITY SUPPLIENT 4 7,09 130 042034 AIRCRARFI MEADAILITY SUPPLIENT 4 7,09 130 042034 AIRCRARFI SUPPLIENT 4 93,672 18,658 75,456 34,837 2,985 U 042034 ADVANCE ATTLOCHELIOUPTER 4 73,930 17,878 130,843 200,000 178,543 U 042034 AIRCRARFI SUPPLIENT FOULDWENT 4 3,490 625 5,319 4,659 5,180 U	1	037464	NINCOPRO I	*	1,240	0++	3,950	11,328		683
64232A AIRCRAFT WEATONS 4,765 2,665 3,325 15,766 10,723 U 6423A AERIAL SCOUT 4 709 130 6423A AERIAL SCOUT 4 3,736 1,475 6,462 7,515 6,926 U 6423A AIRCRAFT SURVICES ATTLOCK MELICOPTER 4 93,672 18,658 75,456 34,837 2,985 U 64203A ADVA,CES ATTLOCK MELICOPTER 4 73,930 17,878 130,843 200,000 178,543 U 64203A AIRCRAFT SURVILLITY EQUIPMENT 4 3,490 625 5,319 4,659 5,180 U	128	642314	AIRCRAFT ACTORIUS	,	5,388	1,055	3,817	4.878		889
042034 AEKIAL SCOJI 042044 AIR WOGALLIY SUPPORT EQUIPMENT 4 3,738 1,475 6,482 7,515 6,928 U 042074 AIR WOGALLIY SUPPORT EXPENSE AND ALTECT RAILS ADVANCE ATTLCS WELICOPPER 4 73,930 17,978 130,843 200,000 178,543 U 042074 AIRCRAFT SUPPORT 4 3,490 825 5,319 4,659 5,180 U	129	042324	A LACABET SESPONS	,	4,765	2,665	3, 925	15,766		969
042044 AIR MODILITY SUPPURITY SUPPURITY 4 31736 1,475 6,462 7,515 6,926 U 042034 UTL 14D TRANS ADVAIGED ATTACK MELICOPPER 4 93,672 18,058 75,450 34,837 2,985 U 042034 ADVANCED ATTACK MELICOPPER 4 73,930 17,878 130,843 200,000 176,543 U 042034 AIRCHAFT SURVIVABILITY EQUIPMENT 4 3,490 625 5,319 4,659 5,180 U	130	042034	AERIAL SCOUT	,	602	130			ס	
0+2034 UTL 110 TAA.5 ACFT 375 (UTTAS) 4 93.672 18,638 75,456 34,837 2,985 U 0+2034 ACKART SURVINELITY EQUIPMENT 4 73,930 17,878 130,843 200,000 178,543 U 0+2094 AIRCRAFT SURVINELITY EQUIPMENT 4 3,490 825 5,319 4,659 5,180 U	131	042044	AIR HOBILITY SUPPORT EQUIPMENT	,	3,738	1,475	6,482	7,515	6,928 U	704
042074 ADVWHOCE ATTACK HELICOPTER 4 73,930 17,878 130,843 200,000 178,543 U 042094 AIRCRAFT SURVIVABILITY EQUIPMENT 4 3,490 825 5,319 4,659 5,180 U	25	0+2354	UTIL 140 TRAMS AOFT SYS (UTTAS)	,	93,672	18,658	75,450	34,837		111
042034 AINCRAFT 3URVIVENT COULDMENT 4 3,490 625 5.319 4.659 5.180 U	133	042074	ADVAICE, ATTACK HELICOPTER	,	73,930	17,878	130,843	200,000		724
	*	0.2034		,	3,490	828	5,319	4.659		732

AKHY	PROCEAM
THE	u
30	_
-	0
ARIME	œ
GEFAS	1978
	1

EXHIBIT R-1

Section	Section 2 (Contd)		FY 1978 2 0	R D T + E PROURAM	-	Ex	EXHIBIT R-1		
		ARMY - LEVAL - DESCRIPTION OF LEVAL - ARMY	ARMY			DATE: 03	03 JAN 1977		
7	APPLICATION					THOUSANDS OF DOLL ARS	OF DOLLARS		
			•					, w	DESCRIPTIVE SUMMARY
N O	ELEYENT NUMBER	ITEM NUMENCLATURE	A C1	FY 1976	FY 19TQ	FY 1977	FY 1978	FY 1979 C	PAGE NUMBER
		**************************************	,	3,750	930	7.482	14,398	10,827 U	736
661	, , ,	40000 C	,	9,800	2,250	25,875	32,022	16,336 U	744
136	461340						18,300	14,800 U	751
137	042144	ואובאיר אכים אברונו		5.837	190	54.8		2	
138	0+3024	AIR JEFENSE CONTROL COOKU STSTER		33 72	1.663	25.425	17,509	24,688 U	753
139	0+306A	STINGER	,	668433		4 75 000	21 4.55	210.027 U	160
1.0	543374	PATRICT (SAM-C)	•	136,600	000.04	6471061			671
141	0+3334	PRECISION LASER DESIGNATOR	3	7,700	2,200	6,350	5.326	3, 993 0	00/
?	4003	327	,	54,905	11,510	85,325	64,003	19,149 U	775
: :		A STILE-HELLFIRE	,	0000**	000	17,818	50,482	67.714 0	781
: :			,	3,270	650	1, 999	629	0 605.6	788
			,	6,903	00%	1,118	5,089	3,537 U	793
			,						798
			,	170				כ	
141	4 + 0 0 + 0			7.539	1,885	6.878	1,617	1,892 U	811
148			. ,	352	230	654	56	1,563 U	818
143			. ,	0.0		054	4.85	005	820
150				18 4	383	1, 957	2,520	3,957 U	822
151	₹60940	COMBAT SUPPLIET SYSTEMS				9 078	2.771	2,175 U	825
152	040104	LETHAL CHEMICAL MUNITIONS		3,503	7.1	816.7			000
153	645124	COUNTERMINE AND SARRIERS	,	2,335	730	5,298	292.9	13,969 0	070
15.	040134	INCAPACITATING CHEMICAL MUNITIONS	3					1,514	837
4 4			,	3.858	06+	5,326	5,105	6,119 0	839
150			,	5.713	2,000	8,223	2,451	3	678
157			,	18,915	3, 138	30,000	25,251	15,523 U	852

DEPARITENT OF THE ARMY FY 1978 R D T + E PROGRAM

SUMMARY PAGE NUMBER 953 950 943 176 DESERIPTIVE 933 938 930 918 922 925 912 905 915 890 893 871 877 883 887 828 864 6,313 U 5,500 U 3,485 U 10,106 U 2,066 U 8,706 U 5,314 U 2,559 U 0 648 6 FY 1979 C 11,958 U 1,092 U 2,000 U 363 ∪ 1,737 U 13,853 U 2,283 U 17,200 U 76,757 U 6,111 0 5,042 1,109 1,656 3,761 2,542 3,804 8,192 3,903 1,150 2,362 3.838 1,748 11,674 7,109 810 6,515 822 9,251 36,028 FY 1978 117,746 12,237 DATE: 03 JAN 1977 THOUSANDS OF DOLL ARS 1.290 3,011 3,452 2,141 3,036 774 7.855 5,274 4,327 2,504 404.4 5,687 7,200 208 666 '5 15,806 105,749 FY 1977 8.459 36,119 20,169 1,103 279 250 884 730 1,723 916 672 488 1,785 009 305 1,629 1,990 1,698 3,000 FY 1970 5,239 39, 353 3,631 4,733 3,954 3,420 944 4.554 2,900 5,426 2,782 4,550 AFFKLPALATION: 2040 A RESEASON DEVELOPHENT TEST + EVAL. ARMY 5,640 2,548 4,346 1,202 4,453 6,861 4,686 FY 1976 52,835 14,000 14,831 10,000 ACT COMSAT FEEDING. GLUTHING AND EQUIPMENT OUTILA TACTICAL SELF PROTECTIVE EM SYSTEMS DESITA VEH RAFIL FIRE MON SYSTEM-SJÖHMASTER FIELD ANTILLERY WEAPONS & ANNO 8 IN D4714A TACTICAL ELECTRICAL POMER SOURCES 647154 NON-SYSTEM TRAINING DEVICES-ENG UT AUV TAG GCHOZONTRLZGUMM PROG O4705A RADICLUGICAL DEFENSE EQUIPMENT SICLUGICAL DEFENSE MATERIEL CHESTICAL DEFENSE MATERIEL SPECIAL PURPUSE DETECTORS 047344 UNATTENLED GRUUND SENSORS ITEM NOMENGLATURE GENERAL CUMBAT SUPPORT 0471GA NIGHT VISION DEVICES MAPPING AND GECOEST COMM ENGINEERING DEV INPRIVED TON VEHICLE DA7184 PHYSIGAL SECURITY OF5134 LANUMINE MARFARE 647094 IFF EQUIPMENT TANK SYSTEMS COFFERHEAL 545234 VIPER 047234 0.7254 047164 0+724A 047172 047134 647014 047124 046264 040214 545274 LINE CLESENT 0402040 115 170 111 113 174 172 1/1 108 103 17. 191 100 163 104 165 191 102 153 100 158

DESCRIPTIVE SUPMARY PAGE NUMBER FY 1979 C 515 U 147 0 5-----1,009 U 6,772 U 2,275 U 4,381 0 8,500 U 0 678.4 22,778 U 3,482 U 0 00 9 11,165 U 10,550 U 23,920 U 1,208 U 18,445 U APPRJURGIATION: 20+0 A RESEARCH DEFELOPMENT TEST + EVAL, ARMY FY 1978 4,880 8,608 7,822 12,962 3,385 2,836 184 4,270 13,920 13,052 5,229 2,538 11,354 244 828 EXHIBIT R-1 FY 1977 10,799 6,497 6,907 5,817 1,745 8,136 3,277 1,999 5,893 604.5 4.004 6,011 19,561 FY 19TQ 1,930 1,425 1,200 1,012 1,219 1,210 138 831 924 758 210 176 365 3,117 360 DEPARTMENT OF THE ARMY FY 1978 R O T + E PROGRAM FY 1976 2,534 4,180 1,750 641.4 406 8,820 10,340 1,866 3,426 1,900 8,951 4,513 2,545 068.4 251 4,322 ACT FAMECEZUET CUNIVERSAL ENGR TRACTOR STANGUFF TARGET ACQUISITION SYSTEM HI AVTI-TANK ASSAULT MPN STS (TOM) TED ANTI-TANK ASSAULT MPN (DRAGON) 04725A METECRULUGICAL EQUIPMENT SYSTEMS JOINT COMP AND INTEROF (GANJ-EA) COMM ELECTRONICS TESTING ACTYS AUTOMATIC TEST SUPPURT SYSTEMS TACTICAL SURVEILLANCE SYSTEM ITEM NOMENCLATURE TAC FIRE UIR SYS (TAUFIRE) REMUTELY PILCTED VEHICLES SMILLELGUM (LBR) MSL SYS LAND CHOT SPT SYS (LCSS) SAM HAMKINAMK IND FRUG COUNTER BATTERY RADAR COUNTER HURTAR RADAR TAUTICAL EN SYSTEMS COMMAND AND CONTROL CHAPFARAL Section 2 (Contd) LINE ELEMENT NO NUMBER D47234 047464 54747A 0+7434 D47+5A 647484 057514 237314 6+727A 0+7234 047304 0+731A 237194 237234 437244 237274 237364 237254 181 183 186 187 188 189 193 194

194 185 190 191 192

135 190 141 1 30 199 200

996 696 974 616 982

384

992 995 1014 1021 1024 1030 465 473 482

457

502 207

> 4,871 U 5,921 U

193

2,000 1,100

1,000

5,218

4,813 U

4,556

865

3,053

MEDAL TANK PROLUCT INF PROG

LANCE (NNL) HARHEAD

237334

237354

VULCAN

Sect	Section 2 (Contd)		FY 1978	DEFARINENT OF THE ARMY 1978 R D T + E PROGRAM	44	u	EXHIBIT R-1		
Arra	36-81 4TION	- NESEAMEN	****			CATE: 03	3 JAN 1977		
					1	THOUS ANDS OF	HOUS ANDS OF DOLL ARS	1 6	
N S	CLE 1EVT	ITEN NOMENCLATURE	P 15	FY 1976	FY 1970	FY 1977	FY 1978	FY 1979 C	DESCRIPTIVE SUMMARY PAGE NUMBER
203	2 6 0 1 0 3	UT TACTIONE COMM PRUG (TRI-TAC)	,	606.65	9, 957	37,328	58,876	0 086,84	524
504	332+24	SATULM UKUUNE ENVIRONMENI	,	9,981	2,735	8,752	13,280	17,000 0	545
502	331454	ELOCH & SYSTEMS	,	200	250	1,241	2,752	1,164 U	558
	140113	TAUTION TRUCKANS		935,025	244,599	1,188,724	1,431,164	1,459,276	
506	634034	NAVSTAR GLUBAL PUSITIONING SYS	2	0,430	1,550	7,518	1,937	ס	1051
201	059324	INTL CLUPERATIVE RESEARCH AND DEV	5	425	100	456	581	0009	1054
208	310224	SCIENTIFIC AND TECH INTELLISENCE	5						1034
503	320534	NMCS MILE SUFFORT CUMMUNICATIONS	5				2,614	2.000 ∪	1037
210	33401A	COMSEC	5						1040
211	321047	NAVSTAR GLUBAL POSITIONING SYSTEM	5				8,535	0 605.5	1047
	INTELL	INTELLICENCE AND COMMUNICATIONS		11,895	3,275	12,988	17,683	14,694	
212	632154	JOINT SURVIVABILITY INVESTIBATIONS	٠٥	9 0 0	150	200	581	009	1057
213	035154	TARGET MISSILES	٥	2,496	1,150	2,800	2,905	0 000 .	1060
514	410140	STUDIES AND ANALYSES	9	6.000	1,500	3,860	3,971	9.400 0	1063
515	051324	TRALDO STUDIES AND ANALYSES	٥	3.0.0	990	2.425	3,389	0000.	9901
210	053414	KMAJALEIN MISSILE RANGE	٥	77.827	20,000	82,926	87,239	93,820 U	1070
211	057324	SUPPLIET OF DEVELOPMENT TESTING	٥	24.819	7,136	22,563	23,524	28,473 U	1074
218	65736A	MATERIAL SYSTEMS ANALYSIS	٠	10.082	2.458	9.274	9.224	10,122 0	1093
513	057374	SUPPLIET USER TEST - TRAUSC	٠	13,250	960.,	16,920	18,107	19,650 U	1099
220	657334	THEATER NUCLEAR FORCE SURVIVABILITY	٥	1.000	001	£ 8 4	1,373	3,200 U	11111
122	460760	EXALUATION OF FOREIGN COMPOVENTS	•	1,285	255	2.013	3,389	3.500 U	1113
222	557164	SUPPORT USER TEST - DIEA	٥	4.105	562	7,393	7,501	7,455 U	1117

			D	FY 1979 C SUMMARY	7,000 J 1122	72,176 U 1125	3611	6611 0 666,4	173,785 U 1139	437,740		,627
	1	S		•	4,551 7.	70.131 72.		3,426		•		700 2,830,627
EXHIBIT R-1	DATE : 03 JAN 1977	US OF COLLAR		FY 1978					17 158,657	•		17 2,625,700
	DATE	AHOUSAN		FY 1977	4.812		8	3,873	711.651 7	'		2,305,117
GRAM				FY 1970			13.168	716	166 35	1		509,458
DEPARTMENT OF THE ARMY FY 1978 & D T + E PROGRAM				FY 1976			53,322	3,101		130,012	331,332	1,970,399
0EPAKT FY 1978		+ EVAL, AKAT		A CT		٥	9	4		٥		
		APPRAJERIATION: 2046 A RESEARCH DEVELUPMENT TEST + EVAL, ARTI		ITEH NOMENCLATURE		LO SYSTEMS INTEGRATION	SALIVITIES ACTIVITIES		658034 TECHNICAL INFO ACTIVITIES	BESUNA MAJUR ALL TIE FACILITIES-DARCOM	GEMENT AND SUPPORT	MENT TEST + CVAL, 43HY
	Coutd)	1341 2040 H RE		77.7		223 057134 GATILETIELD SYSTEMS	N. M. G.		D34 TECHNICAL	3.4 MAJUR ATU	PROSTANTOE MANAGEMENT AND	+ LOSAL TO SERVICE TO
	Section 2 (Contd)	APPRUFRIAT		LINE ELEMENT NO HOMBER		223 0571		****	225 658	226 658	**	

DEPARTMENT OF DEFENSE, MILITARY
RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARM
DETAIL BY PROGRAM OF PROPOSED FY 1977 SUPPLEMENTAL ESTIMATES
(\$ in Thousands)

Section 2 (Contd)

Program Element	lent	Base	Civilian Pay Incr. Costs	Adjusted
Number	Title	Estimate	Supplemental	Estimate
Technology Base	In-House Laboratory Independent Research	14.502	135	14,637
6.11.02.A	Defense Research Sciences	82,240	1,007	83,247
6.21.05.A	Materials	10,126	400	10,526
6.21.11.A	Atmospheric Investigations	4,266	79	4,330
6.21.20.A	Fuze, Nuclear Weapons Effects, Fluidics	12,652	232	12,884
6.22.01.A	Aircraft Weapons Technology	1,798	77	1,842
6.22.02.A	Aircraft Avionics Technology	4,926	80	900,5
6.22.09.A	Aeronautical Technology	15,604	206	15,810
6.23.03.A	Missile Technology	28,634	306	28,940
6.26.01.A	Tank and Automotive Technology	7,034	129	_ 7,163
6.26.03.A	Large Caliber and Nuclear Technology			
6.26.17.A	Small Caliber and Fire Control Technology	13,360	214	13,574
6.26.18.A	Ballistics Technology	17,453	258	17,711
6.26.22.A	Chemical Munitions and Chemical Combat Support	4,057	79	4,121
6.27.01.A	Communications Electronics	7,000	28	4,028
6.27.03.A	Combat Surveillance Target Acquisition and			
	Identification	4,231	125	4,356
6.27.05.A	Electrical and Electronic Devices	11,050	161	11,211
6.27.06.A	Chemical Biological Defense and General Investigation	12,598	176	12,774
6.27.07.A	Mapping and Geodesy	3,100	88	3,188
6.27.09.A	Night Vision Investigations	5,085	79	5,149
6.27.15.A	Tactical Self Protective Electronic Warfare			
	Technology			
6.27.16.A	Human Factors in Military Systems	3,831	32	3,863
6.27.19.A	Military Construction and Engineering Technology	2,631	181	2,812

Section 2 (Contd)

DETAIL BY PROGRAM OF PROPOSED FY 1977 SUPPLEMENTAL ESTIMATES
(\$ in Thousands)

Adjusted Estimate	12,120 3,876 2,406 9,725 2,730 8,914 6,042 14,093 3,040 7,305 6,657	3,857 1,717 2,039 2,383 2,700 6,328 2,574 4,892 3,240 2,718 2,267 855 2,118 3,997
Civilian Pay Incr. Costs Supplemental	120 76 60 161 39 39 195 289 92 92 204	6,034 105 24 28 24 28 14 24 24 26 130 96 7 7 46 21 23
Base Estimate	12,000 3,800 2,346 9,564 2,691 8,719 5,753 14,001 2,879 7,213 6,453	3,850 1,612 2,015 2,015 2,676 6,300 2,560 4,868 3,110 2,622 2,622 2,622 2,622 2,623 3,110 3,110 3,110 3,110 3,110 3,972
ement <u>Title</u>	Environmental Quality Technology Army Training Technology Clothing, Equipment, and Packaging Technology Clothing, Equipment, and Packaging Technology Food Technology Construction Operations Technology for Cold Regions Mobility Equipment Technology Mobility Equipment Technology Mobility Equipment Technology Military Infectious Disease Technology Military Psychiatry and Microwave Injury Recovery From Injury Medical Defense Against Biological Agents	Subtotal - Technology Base Advanced Technology Development 6.32.01.A 6.32.06.A Aircraft Weapons 6.32.08.A Aircraft Avionics Equipment 6.32.09.A Air Mobility Support 6.32.11.A Advanced Vertical Take Off Landing (VTOL) 6.32.12.A Air Mobility Support 6.32.11.A Advanced Vertical Take Off Landing (VTOL) 6.32.12.A Air Mobility Support 6.36.04.A Air Mobility Support 6.36.04.A Air Mobility Support 6.36.04.A Air Mobility Support 6.36.04.A Advanced Fuze Design 6.36.04.A Army Small Arms Program 6.36.07.A Advanced Fuze Design 6.36.13.A Countermine and Barriers 6.36.13.A Countermine Development
Program Element Number T1	Technology Base 6.27.20.A 6.27.22.A 6.27.23.A 6.27.24.A 6.27.30.A 6.27.33.A 6.27.34.A 6.27.70.A 6.27.70.A 6.27.72.A	Subtotal - Advanced Techn 6.32.01.A 6.32.06.A 6.32.09.A 6.32.11.A 6.32.11.A 6.36.04.A 6.36.04.A 6.36.07.A 6.36.19.A 6.36.19.A 6.36.19.A

Section 2 (Contd)

DETAIL BY PROGRAM OF PROPOSED FY 1977 SUPPLEMENTAL ESTIMATES (\$ in Thousands)

Adjusted Estimate	3,944 1,703 13,430 5,060 7,397 5,692 3,531 1,193	(131,517)	102,734 100,072 (203,256)	3,746	817	3,483	3,817 3,925 6,482
Civilian Pay Incr. Costs Supplemental	44 18 92 53 24 14 56	666	70 72 142	210 24	7	11 39	44
Base Estimate	3,900 1,685 13,338 5,007 7,373 5,678 3,475 1,164	(130,518)	102,664 100,000 (203,114)	3,536 3,771	810	3,472	3,773 3,901 6,471
Program Element er <u>Title</u>	Advanced Technology Development (Continued) 6.37.02.A Electric Power Sources 6.37.03.A Automatic Data Processing Equipment Developments 6.37.10.A Night Vision Advanced Development 6.37.21.A Command and Control 6.37.23.A Command and Control 6.37.23.A Remotely Piloted Vehicles/Drones 6.37.31.A Military Personnel Performance Development 6.37.31.A Advanced Technology for Automatic Test Equipment 6.37.48.A Joint Combat Contact Point and Test	Subtotal - Advanced Technology Development	Tegic Programs Od.A Ballistic Missile Defense Advanced Technology O8.A Ballistic Missile Defense System Technology Subtotal - Strategic Programs	Programs Field Artillery Weapons and Ammunitions Development Communications Development Tactical Self Protective Electronic Warfare	Equipment Mapping and Geodesy	Electronic Warfare Vulnerability/Susceptibility Tactical Operations System (TOS) Combat Support Equipment	Tactical Electronic Warfare Equipment Aircraft Avionics Aircraft Weapons Air Mobility Support Equipment
Progra	Advanced T 6.37.02.A 6.37.03.A 6.37.10.A 6.37.21.A 6.37.23.A 6.37.23.A 6.37.25.A 6.37.48.A	Subtot	Strategic Programs 6.33.04.A Bs 6.33.08.A Bs	Tactical Programs 6.36.28.A 6.37.07.A 6.37.11.A	6.37.12.A	6.37.18.A 6.37.22.A 6.37.26.A	6.37.45.A 6.42.01.A 6.42.02.A 6.42.04.A

Section 2 (Contd)

DETAIL BY PROGRAM OF PROPOSED FY 1977 SUPPLEMENTAL ESTIMATES (\$ in Thousands)

			Civilian Pay	
Program Element	int	Base	Incr. Costs	Adjusted
Number	Title	Estimate	Supplemental	Estimate
Tactical Programs (Continued)	(Continued)			
6.42.07.A	Advanced Attack Helicopter	130,801	42	130,843
6.42.09.A	Aircraft Survivability Equipment	5,310	6	5,319
6.43.02.A	Air Defense Control Coordination System	339	6	348
6.43.06.A		25,349	76	25,425
6.43.07.A	PATRICT (SAM-D)	179,953	295	180,248
6.43.09.A	ROLAND	85,001	25	85,026
6.43.10.A	Heliborne Missile-HELLFIRE	17,774	777	17,818
6.46.03.A	Nuclear Munitions			
6.46.05.A	Field Artillery Weapons and Ammunition, 105mm	6,598	280	6,878
A.60.99.9	Combat Support Systems	1,929	28	1,957
6.46.10.A	Lethal Chemical Munitions	2,856	122	2,978
6.46.12.A	Countermine and Barriers	5,273	25	5,298
6.46.15.A	Tank Thermal Sight	8,199	24	8,223
6.46.16.A	H	29,897	169	30,066
6.46.17.A	Vehicle Rapid Fire Weapons System-BUSHMASTER	20,000	169	20,169
6.46.19.A	Landmine Warfare	8,258	201	8,459
6.46.20.A	Tank Systems	105,356	393	105,749
6.46.21.A	COPPERHEAD	36,081	38	36,119
6.47.01.A	Communications Engineering Development	5,651	36	2,687
6.47.06.A	Radiological Defense Equipment	505	3	208
6.47.10.A		2,427	77	2,504
6.47.12.A	Joint Advanced Tactical Command, Control, and			
	Communications Program	4,320	7	4,327
6.47.13.A	Combat Feeding. Clothing and Equipment	5,235	39	5,274
6.47.14.A	Tactical Electrical Power Sources	3,400	52	3,452
6 47.16 A	Mapping and Geodesv	2,125	16	2,141
6.47.17.A		3,022	14	3,036
6.47.24.A	Biological Defense Material	3,000	111	3,011
6.47.25.A	Chemical Defense Material	4,985	52	5,037
6.47.26.A	Meteorological Equipment and Systems	250	6	259
6.47.27.A	Command and Control	6,472	25	6,497

Section 2 (Contd)

DETAIL BY PROGRAM OF PROPOSED FY 1977 SUPPLEMENTAL ESTIMATES (\$ in Thousands)

Program Element Number Title	Base Estimate	Civilian Pay Incr. Costs Supplemental	Adjusted Estimate
Tactical Programs (Continued) 6.47.28.A Family of Military Engineering Construction Equipment/Universal Engineer Tractor (FAMECE/UET)	868.9	6	6,907
6.47.45.A Tactical Electronic Warfare Equipment			
	3,253	24	3,277
	5,400	6	2,409
2.37.30.A CHAPARRAL	2,000	11	5,011
2.37.31.A SAM HAWK/HAWK Improvement Program	19,550	11	19,561
2.37.35.A M60Al Tank Product Improvement Program	4,063	8	7,066
2.80.10.A Joint Tactical Communications Program (TRI-TAC)	37,263	65	37,328
3.31.42.A Satellite Communications (SATCOM) Ground Environment	8,710	42	8,752
Subtotal - Tactical Programs	(1,185,653)	3,071	(1,188,724)
Intelligence and Communications			
3.34.01.A Communications Security (COMSEC) Equipment	1		
		•	
Subtotal - Intelligence and Communications	(12,964)	24	(12,988)
Programwide Management and Support			
6.53.01.A Kwajalein Missile Range	82,854	72	82,926
	22,440	123	22,563
	9,100	174	9,274
	16,803	123	16,926
6.57.09.A Evaluation of Foreign Components	2,010	3	2,013
6.58.01.A Programwide Activities	59,488	1,490	826,09
6.58.03.A Technical Information Activities	3,841	32	3,873
o.Jo.O4.A rajor nesearch and beveropment and resu	157,000	2,117	159,117
Subtotal - Programwide Management and Support	(375,746)	4,134	(379,880)
All Other Programs	398,750		398,750
TOTAL PROGRAM	2,290,713	14,404	2,305,117

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY PERFORMER DISTRIBUTION

(\$ in Thousands)

Appropriation: Research, Development, Test, and Evaluation, Army

Section 3

1			Total (Total Obligational Authority	uthority	
		FY 1976	FY 19TQ	FY 1977	FY 1978	FY 1979
-	1. For operation of installations of the					
	reporting DOD Component					
	Government operated	861,699	196,041	708,035	743,999	778,292
5.	-					
	reporting DOD Component					
	Contractor operated	680,65	13,185	53,060	55,681	62,151
3	For contracts directly in support of					
	work actually performed at installations					
	of the reporting DOD Component ,	34,309	9,631	41,683	42,637	43,970
4	For work assigned to other Department					
	of Defense activities	212,941	24,687	230,241	270,344	286,798
5	For work assigned to activities of					
	other Government agencies	38,107	5,788	21,647	18,482	19,918
9	For work performed by industrial					
	contractors ("profit" organizations)	906,580	216,142	1,178,518	1,415,309	1,553,843
7	For work performed by educational					
	institutions					
	a. Designated Fed Contract Res Centers	10,110	2,595	10,670	11,097	11,763
	b. Other Institutions	31,847	6,832	39,493	44,531	47,055
80	For work performed by other					
	profit" organizations					
	a. Designated Fed Contract Res Centers	1,782	682	3,612	4,729	5,238
	b. Other Institutions	16,436	3,875	18,158	18,891	21,599
6		000				000
	Army Appropriation	1,970,399	209,428	7,305,117	7,672,700	7,830,971

DEPARTMENT OF DEFENSE, MILITARY RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY

This installation analysis indicates the resources of dollars and manpower utilized by Army installations in the accomplishment INSTALLATION ANALYSIS - IN-HOUSE Section 4

direct costs and indirect or support costs. These funds are a part of project costs shown in the budget for the various projects. The amounts reflected under the category "RDTE Funds" include funds received directly through command channels, and reimbursable RDTE effort performed for other Army activities and other Department of Defense agencies. "All Other Funds" reflect the in-house effort at multi-mission installations for other than Research, Development, Test, and Evaluation, Military Construction and installations and research, development, or test units located at multi-mission installations. Funds being reported cover both of the in-house research, development, test, and evaluation effort, including contractor operated installations, under the management control of the Army. Installations reported include both installations classified as research, development, or test Military Personnel costs. Military Personnel costs reflect those military personnel assigned to RDTE activities and other military personnel located at the installation in support of non-RDIE activities at multi-mission posts.

assigned to support Army RDTE effort are divided between spaces charged directly to the RDTE appropriation as reflected in the personnel summary (Page 8) and spaces assigned to the Army Industrial Fund and indirectly charged to the RDTE appropriation. The personnel reflected are reported in terms of man years utilized as opposed to the number of personnel spaces. Spaces Contractor personnel shown are engaged in direct support or operation of Army installations.

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY INSTALLATION ANALYSIS - IN-HOUSE

INDEX

Page No.	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
Installation Army Industrial Fund Installations	Aberdeen Proving Ground, Aberdeen, Maryland. Dagway Proving Ground, Dugway, Utah. Dagway Proving Ground, Dugway, Utah. Dagwood Arsenal, Edgewood, Maryland Frankford Arsenal, Edgewood, Maryland Frankford Arsenal, Philadelphia, Pennsylvania Harry Diamond Laboratories, Washington, DC Materials and Mechanics Research Center, Watertown, Massachusetts Missile R&D Command, Redstone Arsenal, Huntsville, Alabama Picatinny Arsenal, Dover, New Jersey Rodman Laboratory, Rock Island, Illinois Natervilet Arsenal, Watervilet, New York Atromedical Research Laboratory, Ft Rucker, Alabama Atr Defense Board, Ft Bliss, Texas Air Wobllity R&D Laboratory, Moffett Field, California Artorne Communications & Electronics Board, Ft Bragg, North Carolina Artorne Communications & Electronics Board, Island, Illinois Arrett Test Center, Fort Greely, Alaska. Arrett Test Center, Fort Greely, Alaska. Arrett Test Command, Headquarters, Rock Island, Illinois Army Material Command, Headquarters, Project Managers Army Material Command, Beadquarters, Project Managers Army Research Office, Research Triangle Park, North Warrenton, Virginia Army Security Agency, Allagon Hall Station, Virginia Army Security Agency, Allagion Hall Station, Virginia Army Security Agency, Allagion Hall Station, Virginia Army Security Agency, Allagion Hall Station, Virginia Army Security Agency, Test & Evaluation Center, Ft Huachuca, Arizona Army Training Devices Agency, Orlando, Florida
Item No.	11. 12. 13. 13. 14. 15. 15. 17. 18. 18. 17. 18. 18. 17. 18. 18. 18. 18. 18. 18. 18. 18. 18. 18

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY INSTALLATION ANALYSIS - IN-HOUSE

Section 4 (Contd)

INDEX

Page No.	\$25,500,000,000,000,000,000,000,000,000,0
Installation Army Non-Industrial Fund Installations	Atmospheric Sciences Laboratory, WhiteSands Missile Range, Las Cruces, New Mexico. Aviation Engineering Flight Activity, Edwards Air Force Base, California Aviation Systems Command Headquarters, St. Louis, Missouri Ballistic Missile Defense Advanced Technology Center, Huntsville, Alabama Ballistic Missile Defense Advanced Technology Center, Huntsville, Alabama Ballistic Missile Defense More Command, Huntsville, Alabama Cold Regions Research & Engineering Laboratory, Hanover, New Hampshire Computer Systems Command, Ft Belvoir, Virginia Construction Engineering Research Laboratories, Urbana, Illinois Electronics Command Headquarters, Ft Mommouth, New Jersey Electronics Command Headquarters, Ft Mommouth, New Jersey Electronics Proving Ground, Ft Huschuca, Arizona Engineer Topographic Laboratories, Ft Belvoir, Virginia Frield Artillery Board, Ft Sill, Oklahoma Human Resource Units, Various Locations. Infantry Board, Ft Sill, Oklahoma Human Resource Units, Various Locations. Infantry Board, Ft Sall Houston, Indiana Kwajalein Missile Range, Marshall Islands. Letterman Arwy Institute of Research, San Francisco, California. Letterman Arwy Institute of Research, San Francisco, California. Letterman Arwy Institute of Research, San Francisco, California. Latison Pield Offices, Various Locations Medical Bio-Engineering R&D Laboratory, Ft Detrick, Maryland Medical R&D Command, Washington, DC.
Item No.	82282333333333333333333333333333333333

DEPARTMENT OF DEFENSE, MILITARY RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY INSTALLATION ANALYSIS - IN-HOUSE

INDEX

Section 4 (Contd)

Page No. Standardization Group, Canada.......... Iri-Service Tactical Communications Systems (TRI-TAC), Ft Monmouth, New Jersey . . . Medical Research Institute of Infectious Diseases, Ft Detrick, Maryland. Army Non-Industrial Fund Installations Installation TRADOC TRADOC Item No.

The state of

. .

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARM INSTALLATION ANALYSIS - IN-HOUSE

Section 4 (Contd) INSTALLATIO

				TO	A (\$ in 7	TOA (\$ in Thousands)					PI	ERSONN	PERSONNEL (Man Years)	Years	7		
										Civil S	Service		Contractor	r Mil	1. Pers		
									•	Paid Paid	pid		Paid				
Installation		RD	RDTE Funds	ø	A11					From Fr	From Paid		Paid From		In		
and		Mgmt .	Other	Other	Other		Mil. P	Pers.		Army Ot	Other From			_	RDTE		
Location		Bureau	Army	DOD	Funds 1/	Subtotal	RDTE 0	Other	Total	RDTE RI	RDTE Oth	Other R	RDTE Funds		Work Other	Total	(m)
Army Industrial Fund Installations																	
Aberdeen	76	68.083	1.005	3.506	2.748	75.342	2.842	,	78.184	2.353	28			- 2	61	2.672	72
Droning	E	16 7.63	17.0	260	530	17 701	788	1	18 7.80	200	1.5		1		70	9	67
SILVOIT	7	10,403	0 1	000	000	10,,11	001		10,107	700	3 9						10
Ground, Aber-	11	73,063	745	2,020	1,159	76,987	4,200	•	81,187	2,252	23			- 3	. 02	2,6	5 7
deen, Maryland	78	71,880	009	2,195	2,146	76,821	3,800	,	80,621	2,252	23			- 3	338	2,613	13
	79	79,835	645	2,310	1,366	84,156	3,800		87,956	2,252	23			- 3	38	2,6	113
2.																	
Dugway Proving 76	16	9,902	•	•		9,902	1,808	305	12,015	631	54			-			67
Ground,	2	3,315	•	•	•	3,315	473	79	3,867	158	9	,					113
Dugway, Utah	11	11,096	•	•		11,096	2,077	318	13,491	195	30			-	183 28		802
	78	11,115	•	•		11,115	2,057	315	13,487	531	09		•	- 1			02
	19	11,621	•		•	11,621	2,057	315	13,993	979	45		•	- 1			0.5
3.																	
Edgewood Ar-	91	31,302	129	653	18,201	50,285	1,263	272	51,820	785	12 1	195 ;		- 1	116 25	ŗ	133
senal, Edge-	2	7,538	21		2,563	10,122	315	42	10,516	198	•	87					81
wood, Maryland	11	29,224	100	1,100	9,661	40,085	1,283	148	41,516	673		114		-	13 13		53
	78	31,457	100	006	12,811	45,268	1,270	146	789,94	719	13	117		-			30
	19	34,005	100	006	12,811	47,816	1,270	146	49,232	674		117		- 1			30
4.																	
Frankford Ar-	9/	5,284	182	234	2,204	7,904	11		7,915	450	9	59				2	516
senal, Phila-	70	2,130		•	658	2,788	•		2,788	115		15				-	30
delphia,	17	3,943	200	300	1,115	5,558	•	•	5,558	427	13	20				7	06
Pennsylvania	78	Deact	Deactivated.														
	19																

1/ Exclusive of Military Personnel and Military Construction

DEPARTMENT OF DEFENSE, MILITARY
RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY
INSTALLATION ANALYSIS - IN-HOUSE

1																												
				Total			1,415	357	1,364	1,364	1,364		676	164	634	634	989		1,556	430	1,708	1,773	1,678	4,258	1,050	4,715	5,336	5,884
	Pers.			Other			10	3	10	10	10		•	•	•	•	1		•	1	•	•		31	80	32	33	33
rs)	Mil. I	In		Work			•	,	•	•	•		12	3	16	16	16		113	59	128	129	127	53	13	58	69	11
an Yea	1	From	Other	Funds			•				•					•	•		•		,	•		•	•	,	•	
PERSONNEL (Man Years)	Contractor	Paid F	From 0	RDTE F									-1		-	7	1		•		•			,		ι		
PERSON	İ			Other			,028	569	,019	945	- 945		182	94	184	184	184		4	•			•	2,208	542	,353	,565	2,754
	Servic	_		RDTE			- 1	•	-	•			16	4	14	14	14		17	2	20	20	20	10 2	2	13 2	27 2	36 2
	Civil Service Paid Paid	From F		RDTE R			377	82	335	604	604		465	111	419	419	419		1,422	396	1,560	1,624	1,531	1,956	485	2,259	2,642	2,984
				Total			39,285	9,982	36,602	30,191	30,983		20,931	5,162	19,823	22,833	25,470		55,694	17,664	62,514	66,403	64,414	84,827	20,759	82,139	89,648	101,070
			Pers.	Other			109	34	113	112	112				•		•			•	•			338	90	363	371	371
			Mil.				•	•	•	•	•		131	34	182	180	180		1,230	326	1,453	1,450	1,450	577	146	658	176	866
TOA (\$ in Thousands)				Subtotal			39,176	8,6,6	36,489	30,079	30,871		20,800	5,128	19,641	22,653	25,290		54,464	17,338	61,061	64,953	62,964	83,912	20,523	81,118	88,501	99,833
A (\$ in		A11	Other	Funds 1/			7,858	726	3,999	2,759	2,759		6,177	1,646	5,631	8,085	8,500		210	•	•	•	•	47,811	11,953	44,821	46,354	51,865
TO		5	Other	DOD			818,6	2,650	10,020	7,092	7,092		734	43	400	300	380		822	213	940	046	076	1,741	831	5,558	4.419	1,016
		RDTE Funds	Other	Army			710	50	383	•	•		2,209	413	2,800	2,956	3,620		1,509	100	955	755	755	307	151	425	200	350
		RD	Mgmt.	Bureau			21,030	6,522	22,087	20,228	21,020		11,680	3,026	10,810	11,312	12,790		51,923	17,025	59,166	63,258	61,269	34,053	7,588	30,314	37,528	46,602
				FY			92	TQ	11	78	79		9/	Ţ	11	78	79		91	To	11	78	42	9/	To	17	78	62
		Installation	and	Location	al Fund Installations	5.	HarryDiamond	Laboratories,	Washington, DC			.9	Materials and	Mechanics	Research Cen-	ter, Watertown,	Massachusetts	7.	Missile R&D	Command, Red-	stone Arsenal,	Huntsville,	Alabama	Picatinny Ar-	senal, Dover,	New Jersey		

1/ Exclusive of Military Personnel and Military Construction

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY INSTALLATION ANALYSIS - IN-HOUSE

1			1				3	7	2	3			4	9		00	00	2	6	0	3	3	
			Total				93	14	612	94			52	7	31	328	34	4,53	3,50	4,21	14,243	4,25	
	80		er						ı	,			2	1	2	2	2		25			86 1	
	Pers		Other																				
ars)	Mil.	In	Work				00	2	00	,			4	1	4	4	4	734	188	880	852	828	
Man Ye	Paid	From	Funds				17	2	20	54			1	•	•	1	1	17	2	20	24	•	
PERSONNEL (Man Years	Contractor	Paid From (188	•	133	66			1	٠	•		•	189	1	134	100	1	
PERSO	e	Paid From	Other				324	79	294	189			173	20	164	164	164	4,173	1,004	4,178	4,164	4,164	
	2	From 1					19	•	10	6			•	•	•	1	1			139 4		151 4	
	Civil Ser Paid Paid	From A	RDTE F				377	92	147	142			345	55	141	158	178	9,161	2,258	8,774	8,851	8,993	
			Total				18,158	3,066	12,783	8,348			13,061	1,668	7,604	7,959	8,433	381,890	93,961	363,217	367,174	381,551	
		Pers.	Other							1			22		23	22	22	1,046	282	965	996	996	
		Mil.	RDTE				87	22	91				43	11	45	45	45	7,992	2,115	6,86,6	9,578	899,6	
TOA (\$ in Thousands)			Subtotal				18,071	3,044	12,692	9,348			12,996	1,657	7,536	7,892	8,366	372,852	91,564	352,263	356,630	370,917	
A (\$ in		A11 Other	Funds 1/				9,194	1,826	8,486	5,476			6,560	572	4,885	4,885	4,885	100,963	20,474	79,757	82,516	82,186	
TO		Other	DOD				521	•	275	266	ivated.		102	١	١	١	•	8,131	4,297	0,613	16,112	2,638	
		RDTE Funds Other	Army				•	•	•	•	To be deacti		7	•	•	•	,	5,818	883	5,608	4,611	5,470 1	
		Memt.	Bureau				8,356	1,218	3,931	3,606	To b		6,327	1,085	2,651	3,007	3,481	247,940	TQ 65,910	246,285	78 253,391	270,623	
			Y				76	2	17	78	79		. 76	2	c 77	78	79			17	78	19	
		Installation	Location	Army Industri-	al Fund	Installations	Rodman Lab-	oratory, Rock	Island,	Illinois		10.	Watervliet Ar- 76	senal, Water-	vliet, New York			Subtotal Army	Industrial	Fund			

1/ Exclusive of Military Personnel and Military Construction

DEPARTMENT OF DEFENSE, MILITARY
RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY
INSTALLATION ANALYSIS - IN-HOUSE

1																														
				Total				120	29	109	109	109		197	52	207	207	207		909	152	619	622	622		201	42	174	174	174
	Pers.			Other				1	•	٠	•	•		•	•	•	•			•	•	•	•	•			1	•		•
	Mil. I	In		Work				63	14	52	52	52		120	30	120	120	120		27	7	59	28	28		156	30	122	122	122
n Yea	,	From	Other	Funds				1	•	•	1	•			•	•	ı			•		•	ι			•		•	•	•
PERSONNEL (Man Years	Contractor			RDTE Fu				•									•				•		1	•						
PERSO	9	Paid	From	Other				•	•	•		•		•	1	•	ı	1		1	1	•	•	•			1	•		
	Servic			RDTE				1	•	•	•	•		•	•	•	•			•	•	•	•	•		•	•	•	1	•
	Civil Service Paid Paid			RDTE				57	15	57	57	57		77	22	87	87	87		579	145	290	294	594		45	12	52	52	52
				Total				2,989	732	2,810	2,918	3,045		3,199	1,570	3,905	4,009	3,983		14,505	3,642	13,777	14,787	15,513		3,155	724	3,033	2,971	2,906
			Pers.	ther				,	•		•			•	•	•	•	•		٠	•			•			•		•	•
			Mil. P					989	158	658	652	652		1,307	338	1,362	1,349	1,349		767	42	329	315	315		1,655	338	1,385	1,371	1,371
TOA (\$ in Thousands)				Subtotal				2,303	574	2,152	2,266	2,393		1,892	1,232	2,543	2,660	2,634		14,211	3,563	13,448	14,472	15,198		1,500	386	1,648	1,600	1,535
1 (\$ in 7		A11	Other	Funds 1/				213	9	10	10	10		160	381	213	212	147		7	•	10	234	244		140	22	190	190	190
TO		1		000				•	•	•	•	•		•	•	•	•	•		7	10	55	18	20		•	•	•	•	•
		RDTE Funds		Army				•	•	•	•	٠		173	75	135	184	103		1,390	328	1,025	980	1,033		•	٠	•		
		RD	Mgmt.	Bureau				2,090	571	2,142	2,256	2,383		1,559	176	2,195	2,264	2,384		12,807	3,225	12,358	13,240	13,901		1,360	364	1,458	1,410	1,345
				리				16	2	77	78	19		9/	2	11	78	79		9/	2	11	78	4		9/	2	11	78	79
		Installation	and	Location	dustrial Fund	Installations	11.	Aeromedical	Research Lab-	oratory, Ft	Rucker,	Alabama	12.	Air Defense	Board, Ft	Bliss, Texas			13.	Air Mobility	Rad Labora-	tory, Moffett	Field,	California	14.	Airborne Com-	munications &	Electronics	Board, FtBragg,	NorthCarolina

 $\underline{1}/$ Exclusive of Military Personnel and Military Construction

DEPARTMENT OF DEFENSE, MILITARY
RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARM
INSTALLATION ANALYSIS - IN-HOUSE

				Total				909	144	476	410	389		276	69	588	562	568		241	09	500	509	509		566	65	566	266	266
	Pers.			Other								•				•	•				•	•		•		•	•			•
ars)	_	In		Work				259	57	225	221	200		240	09	262	262	262		19	2	22	22	22		181	77	181	181	181
an Ye	ctor	From	Other	Funds				•	٠	•	•	1		15	4	15	15	15		1	1	•	1	ı		1		•	1	•
PERSONNEL (Man Years	Contractor	Paid F		RDTE F				221	55	158	66	66				•				•	•	•	•	,		•	•			
PERSO	ال	Paid	From	Other				1	١	•	•	ı		•	•	1	•	•		37	6	•	•	1		1	ı	•	ı	1
	vic	_		RDTE 0						•		•		•	•			•		•			•			•				•
	Civil Ser Paid Paid	From F		RDTE R				126	32	93	06	6		21	2	22	22	22		185	94	187	187	187		85	21	85	85	85
				Total				10,501	3,024	10,696	8,930	8,731		5,828	1,608	6,405	6,546	6,720		6,308	1,836	5,415	5,613	5,923		3,998	1,559	5,447	5,656	5,352
			ers.	Other				•			1	•		•	•		•				•		1	•		•	•			
			Mil. Pers	RDTE				2,820	732	2,600	2,541	2,293		2,613	675	3,054	3,024	3,024		207	99	250	247	247		1,971	653	2,055	2,035	2,035
housands)				Subtotal				7,681	2,292	8,096	6,389	6,438		3,215	933	3,351	3,522	3,696		6,101	1,780	5,165	5,366	5,676		2,027	906	3,392	3,621	3,317
TOA (\$ in Thousands)		A11		Funds 1/				1,296	533	1,753	1,244	1,244		•			•			906	230	•		•		21	366	275	250	250
TO,		1		DOD				1	•	•	•	•		9	1	•	•	•		•	•	•	•	•		•	•	•	•	•
		P	Other 0	Army							•	•		•						•						•				
		RDI	Mgmt.	Bureau				6,385	1,759	6,343	5,145	5,194		3,209	933	3,351	3,522	3,696		5,195	1,550	5,165	5,366	5,676		2,006	240	3,117	3,371	3,067
								9/	13	77	78	4		91	TQ	11	78	79		16	TQ	77	78	19		91	2	77	78	13
		Installation	and	Location	dustrial Fund	Installations	15. 2/	Aircraft Dev-	elopment &	Test Activity,	Ft Rucker,	Alabama	16.	Arctic Test	Center, Fort	Greely, Alaska			17.	Armament Com-	mandHeadquar-	ters, Rock	Island,	Illinois	18.	Armor and	EngineerBoard,	Ft Knox,	Kentucky	

Exclusive of Military Personnel and Military Construction
DARCOM activity; developmental testing only. See item number 29, Aviation Test Board, TRADOC.
37 1517

DEPARTMENT OF DEPENSE, MILITARY RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARM INSTALLATION ANALYSIS - IN-HOUSE

Civil Service Contractor Mil. Pers.	From Paid Paid Other From From RDTE Other RDTE	Civilian and military spaces are included in the activities where Project Managers are physically located.		75 - 7 - 82	- 38	- 38	. 38		85 15 - 100		12	92 12 - 104	12 -	01				23 2 - 25	. 2	
Ci	From From Army Total RDTE	392 C 100 i 400 a 400 400	8.623 2									2,693						170		
	Mil. Pers. RDTE Other		338		- 887	+83 -			163 -	34 -	136 -	135 -	135				23 -	22 -		
ousands)	Subtotal RI	392 100 400 400 400	8.285			5,587 4						2,558		011	011	56	148	148	148	
TOA (\$ in Thousands)	All Other Funds 1/ Si				•		•			,					,		,			
TO	Other DOD				•	•			•	•	•		•				•			
	RDTE Funds Mgmt. Other Bureau Army	392 100 400 400	8 285	2,096	5,585	5,587	5,287		2,305	725	2,538	2,558	2,558	0:1	011	59	148	148	148	
	M _S M _S	76 77 78 78	76 8		77 5		79 5			2			79 2	36	0/	20	77	78	52	
	Installation and Location Army Non-In- dustrial Fund Installations	y Materiel nand, Head- rters, ject agers	20.			-1	ters, Alexan-	21.	Army Research	Office, Re-	1e		olina				ses Applica-			Virginia

Exclusive of Military Personnel and Military Construction

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARM INSTALLATION ANALYSIS - IN-HOUSE

-	Total	105	108	137	112 113 113	35 35 39 39	758 181 731 736 736
	Other 3						
	In RDTE Work Ot	27 6	27 27 27	97	99	17 17 17 17	483 117 484 489 489
lan Ye	Paid From Other Funds						
PERSONNEL (Man Years	Contractor Paid Paid From Other RDIE Funds			٠.			45 45 45 45
PERSON	ng mg						
	Service Paid From Pa: Other From RDTE Other	52	26 26 26				m m m m
	Civil Paid P From F Army O RDTE R	53	55 56 56	40	7 7 7 7 7 7	18 6 18 22 22	226 52 199 199 199
	Total	2,535	2,992 2,883 2,985	2,617	2,703 2,527 2,666	1,403 475 1,432 1,497 1,514	13,537 4,111 13,188 15,070 15,497
	Pers. Other						
	Mil. Pe RDTE Ot	294 68	307 304 304	1,057	783 776 776	185 45 193 191 191	5,259 1,317 5,495 5,497 5,497
lousands)	Subtotal	2,241	2,685 2,579 2,681	1,560	1,920 1,751 1,890	1,218 430 1,239 1,306 1,323	8,278 2,794 7,693 9,573
TOA (\$ in Thousands)	All Other Funds 1/ S			٠,		11111	103
TOA	Other O	352	504 461 461	٠.			320 120 210 250 250
	RDTE Funds Other O						91111
	RDT Mgmt. Bureau	1,889	2,181 2,118 2,220	1,560	1,920 1,751 1,890	1,218 430 1,239 1,306 1,323	7,789 2,674 7,483 9,323 9,790
1	₹		78 62	92	77 78 79	587.86	387786
	Installation and Location Army Non-In-dustrial Fund	Installations 23. Army Security Agency, Arling-	ton Hall Sta- tion, Virginia	24. Army Security Agency. Test &	Evaluation Center, FtHua- chuca, Arizona	Army Training DevicesAgency, Orlando, Florida	Atmospheric Sciences Lab- oratory, White Sands Missile Range, Las Cruces, New Mexico

/ Exclusive of Military Personnel and Military Construction

DEPARTMENT OF DEFENSE, MILITARY RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARYNI INSTALLATION ANALYSIS - IN-HOUSE

	r Mil. Pers.	In	RDTE	8 Work Other Total			•	- 14 - 47			•		- 40 - 415		•				•			- 52 - 88	٠					- 8 - 106		
PERSONNEL (Man Years)	Contractor	Paid From		RDTE Funds			•	•		•				•	•	•	•								,					
PERSO	ice			Other			•	•	•	•	•		•	•	•	•	•		•	•	•	•	•		•	•	•	•	•	
	d Paid	m From		E RDIE			138			- 121	. 9:			.3	. 9.						- 91	36 -	- 91		- 111	. 8:	- 90	- 86	. 8	
	Civil	From		ROTE									7 375				3 427		2											
			ı	Total			3,489	1,00	4,06	3,99	3,97		18,367	9,458	24,06	30,29	30,18			417	1,889	1,839	1,75		3,532	890	3,94	3,941	4,27	
			Pers.	Other			•	•	•	•	•		•	•	•	•	•		•	•	•	•	•		•	1	•	•	•	
				RDIE			621	191	851	998	843		436	180	704	753	630		,	146	290	585	585		87	23	91	06	06	
TOA (\$ in Thousands)				Subtotal			2,868	812	3,213	3,130	3,130		17,931	9,278	23,356	29,545	29,553		5	271	1,299	1,254	1,169		3,445	867	3,851	3,851	4,183	
(\$ in 7		A11	Other	Funds 1/			•	•	•	•	•		•	•	•	•	•		•	•	•	•	•		•	•	•	•	•	
TOA		1		DOD			•	•	•	•	•		•	•	•	•	•		,	,		,	,			,	,	,	,	
		RDTE Funds		Army			•	•		•	•		76	•	•		•		•		•	•			•	•	•		•	
		RD	Mgmt.	Bureau			2,868	812	3,213	3,130	3,130		17,837	9,278	23,356	29,545	29,553		2	271	1,299	1,254	1,169		3,445	867	3,851	3,851	4,183	
							91 -	70	77	se78	ia79		92	2	11	78	19		16	120		78	19		91 -	Ţ			62	
		Installation	and	Location Army Non-In-	dustrial Fund Installations	27.	AviationEngin- 76	eering Flight	Activity,	EdwardsAirForce 78	Base, California79	28.	Aviation Sys-	tems Command	Headquarters,	St Louis,	Missouri	29. 2/	Aviation Test	Board, Fort	Rucker, Alabama			30.	Ballistic Mis-	sile Defense	Advanced Tech-	nology Center,	Huntsville,	Alabama

Exclusive of Military Personnel and Military Construction
TRADOC activity; formerly part of item number 15, Aircraft Development & Test Activity, DARCOM. Operational testing only. 1515

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY INSTALLATION ANALYSIS - IN-HOUSE

-				Total				67	16	53	53	53		182	04	166	166	166		275	71	282	290	298		22	2	22	22	22
	rers.			Other				٠	•	•	•	•		•	٠	•	•	•		2	-	2	7	2		•	•	•	•	•
	M11.	In		Work				20	2	17	17	17		12	4	6	6	6		11	2	11	11	11		2	-	2	2	2
lan Ye	Paid	From	Other	Funds				•	•	•	•	•			•	•	٠	•			•	•	•	•		•		•	•	•
PERSONNEL (Man Years)	Paid			RDTE F							•	•					•	•		•			•			6	•	•	•	•
PERSON	e	Paid	From	Other				•	•	•	•	•			•	•	•			18	00	35	45	20		•	•	•	•	
7.1.50	Paid Paid			RDTE				•	•	•		•		•	•	•	•	٠		108	23	82	82	83		•		•	•	•
1	Paid Paid			RDTE				29	11	36	36	36		170	36	157	157	157		136	37	152	150	152		17	4	17	17	17
				Total				1,243	797	1,547	1,594	1,594		5,168	1,584	5,584	5,929	6,007		6,740	1,859	7,764	8,526	9,108		1,503	989	2,087	2,524	2,601
			Pers.	Other						•	•				•	•				22	11	23	22	22			•	•		•
				RDTE				218	99	193	191	161		131	45	102	101	101		120	23	125	124	124		24	11	57	99	99
TOA (\$ in Thousands)				Subtotal				1,025	408	1,354	1,403	1,403		5,037	1,539	5,482	5,828	5,906		6,598	1,825	7,616	8,380	8,962		1,449	675	2,030	2,468	2,545
1 (\$ in 7		A11	Other	Funds 1/					•	•	•	•		•	•	•	•	•		3,090	800	3,104	3,790	4,170		45	•	•	•	•
TO		-		000				•	•	•	•	•		•	•	•	•	•		142	37	144	175	192		•	•	•	•	•
		8		Army							•			•			•	•		1,103	288	1,118	1,365	1,500			•			•
		RD	Mgmt.	Bureau				1,025	408	1,354	1,403	1,403		5,037	1,539	5,482	5,828	5,906		2,263	700	3,250	3,050	3,100		1,404	675	2,030	2,468	2,545
				리				92	2	11	78	79		9/	2	,77	78	4		9/	2	17	,78	79		9/	ŢQ	11	78	79
		Installation	and	Location	dustrial Fund	Installations	31.	Ballistic Mis-	sile Defense	ProgramOffice,	Arlington,	Virginia	32.	Ballistic Mis-	sile Defense	SystemsCommand, 77	Huntsville,	Alabama	33.	Cold Regions	Research&Eng-	ineeringLabo-	ratory, Hanover, 78	New Hampshire	34.	Computer Sys-	tems Command,	Ft Belvoir,	Virginia	

1/ Exclusive of Military Personnel and Military Construction

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY INSTALLATION ANALYSIS - IN-HOUSE

		-1		0	0	80	2	2		7	80	7	6	7		00	-1	00	3	3		9	4	7	3	3
		Total		20	20	19	19	19		2,68	65	2,597	2,58	2,53		488	12	51	52	52		29	7	29	293	29
Pers.		Other		•	1	1	•	•		11	4	11	11	11		94	11	53	53	53		•	•	•	•	•
انـا	In			3	1	3	3	3		184	47	189	192	191		238	09	265	270	270		16	4	91	16	16
in Yea	Paid From Other			•	•	•	•	•				•								•		•		•	•	٠
PERSONNEL (Man Years)	Paid Fr From Ot			•	•	•				23	9	21	21	18										•	•	
PERSON	Paid	ы		•	•		•			25	9	54	25	25		32	∞	33	33	33		32	œ	32	32	32
Service				10	•	2	7	7		150	20	87	84	84		33	œ	34	34	34		125	22	109	105	105
Civil	From From Army Othe			187	65	190	182	182		2,294	575	2,265	2,256	2,208		139	34	133	133	133		123	07	140	140	140
		Total		8,974	2,365	10,086	116,01	11,891		99,685	31,491	102,007	108,466	112,544		12,490	3,985	10,911	11,413	11,956		8,054	2,138	7,738	7,554	7,774
	Pers.	Other		•		•		•		120	45	125	124	124		501	124	602	969	969		•				•
		RDTE C		33	11	34	34	34		2,004	529	2,146	2,158	2,147		2,592	675	3,235	3,260	3,260		174	45	182	180	180
TOA (\$ in Thousands)		Subtotal		8,941	2,354	10,052	10,877	11,857		97,558	30,917	99,736	106,184	110,273		9,397	3,186	7,074	7,557	8,100		7,880	2,093	7,556	7,374	7,594
(\$ in 7	A11 Other	Funds 1/		•		•	•	•		9,194	3,926	8,733	6,944	8,955		18		•				734	241	470	420	420
TO	Other			502	43	369	418	400		2,226	126	293	287	325		1,794	265	1,067	1,131	1,189		2,137	533	2,115	2,200	2,200
	RDIE Funds	Army		2,706	403	3,084	3,530	7,400		3,589	1,732	4,218	4,384	4,549		1,452	360	952	937	1,013		1,659	343	1,247	1,008	1,078
	RD	Bureau		5,733	1,908	6,599	6,929	7,057		82,549	25,133	86,492	91,569	547,96		6,133	2,561	5,055	5,489	5,898		3,350	916	3,724	3,746	3,896
	T.	剧		16	3-TQ	- 77	78	4		9/	2	17	78	4		9/	2	11	78	79		92	10	17	78	79
	Installation	Location	Army Non-In- dustrial Fund Installations 35.	Construction	EngineeringRes-TQ	earchLaborato-	ries, Urbana,	Illinois	36.	Electronics	Command Head-	quarters, Ft	Monmouth, New	Jersey	37.	Electronics	ProvingGround,	Ft Huachuca,	Arizona		38.	EngineerTopo-	graphic Labo-	ratories, Ft	Belvoir,	Virginia

 $\underline{1}/$ Exclusive of Military Personnel and Military Construction

DEPARTMENT OF DEFENSE, MILITARY
RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARM
INSTALLATION ANALYSIS - IN-HOUSE

				TO	1 (\$ in T	TOA (\$ in Thousands)				Civil	Parvisa	PERSON	PERSONNEL (Man Years)	n Year	rs)		1
											3	i		1	1	.1	
Memt	RDI	M O	RDTE Funds	Other	Other		Mil. P	ers.		From F	From P	Paid	Paid From From Other		In		
FY Bureau	eau)			1/1	Subtotal	RDTE O	Other	Total			u			Work Other	r Total	tal
76 4,203	203	3		4.594	867	12,523	185	•	12,708	454	303	31	•		17		775
		-	1,076	1,341	195	3,636	45		3,681	108	74	00			4	-	194
3,286		4		5,591	713	13,718	193		13,911	005	330	38			17		785
3,314		4		5,935	763	14,122	191		14,313	405	316	35			17		773
4,550		3		6,095	811	15,101	191		15,292	456	272	33			17		178
336	336		371	•	155	862	22		884	7					2		6
	80		175	•	20	275	•		275	2							7
77 300	300		380	•	345	1,025	111		1,036	00					-		0
	316		365		219	006	11		911	7		•			1		00
79 425	425		375	•	300	1,100	11	•	1,111	7		•			1		œ
76 770	770		•	•	7	777	1,503		2,280	33				,	138	-	171
	232		•	•	•	232	428	•	099	6	•				38		47
1,	060			•		1,090	1,726		2,816	35					152	-	187
78 1,107	107		•	•		1,107	1,709		2,816	35					152		187
79 1,147	147			•	•	1,147	1,709		2,856	35	•	•	•		152		187
76 2,146	971		•	•		2,146	218		2,364	73	•			,	20		93
TQ 646	979					979	45		169	23	•	•			4		27
	931		•	•		2,931	238		3,169	104	•				21	-	125
	060		1	•	•	3,090	303		3,393	104	•				27	-	131
79 3,207	207		•	•		3,207	303		3,510	104	•				27		131

1/ Exclusive of Military Personnel and Military Construction

DEPARTMENT OF DEFENSE, MILITARY
RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARM
INSTALLATION ANALYSIS - IN-HOUSE

1			_1								~	~	~	~	_								_	•			
			Total		155	4]	165	165	165		213	5.	213	213	213		7		7	4	7		3,230	820	3,275	3,277	3,277
Pers.			Other		•	•	•	•	•		•	•	٠	•	•		4	1	4	4	4		•	•	•	•	•
1			Work 0		103	27	109	109	109		139	34	136	136	136								30	00	32	32	32
Year or M	1																•	,					45	79	31	347	95
PERSONNEL (Man Years e Contractor Mi	Paid From		E Funds			,			,			1									ı						
COL	Paid		RDTE																				- 2,719	- 70	- 2,77	- 2,765	2,76
PER	Paid		Other				i													ı							
Civil Service	Paid	Other	RDTE		•	'	•	•	•		•	•	•	•	•		•	•	•	•	•		•	'	•	•	•
Civil	Paid Paid From From	Army	RDIE		52	14	99	99	99		74	19	77	77	77		•		•	•	•		136	33	133	133	133
1	1		Total		2,286	591	2,491	624	779		3,149	190	294	3,414	491		435	151	605	663	695		249	720	868	731	525
			입		2,		2,	2,	2,		3,		3,	'n	3,								64,	16,	63,	66,731	,99
		Pers.	Other		•	•	•	•			,	•	•	•	•		\$	11	45	45	45		•		1	•	•
		Mil. P			1,121	304	1,237	225	225		1,514	383	544	529	529		,	,	,	,	,		327	06	363	360	360
(8)		1																	_								
TOA (\$ in Thousands)			Subtotal		1,165	287	1,254	1,399	1,419		1,635	407	1,750	1,885	1,962		391	140	260	618	650		64,320	16,630	63,535	66,371	66,165
in Th						,	42		,					,			,			•			120		,		
S) AS	A11	Other	Funds 1/																								
I			DOD		•	•	'	•	•		•	•	•	•	•		•	•	1	•	•		4,960	785	3,280	3,980	3,630
	RIVIE Funds	Other	Army		٠	•	•	•	١		,	,	,	١	•		•	•	•	٠	•		6,760		6,600		
	RIM	t.			1,165	287	212	1,399	1,419		1,635	407	1,750	1,885	1,962		391	140	960	819	650					55,771	
-		Mgmt.											1,					_		_							
			리	I ml	1, 76		77	78	79		9/	g.	77	3 78	79		97 .	2	77	78	79		16	, T		78	79
	Installation	and	Location Army Non-In-	dustrial Fund Installations	InfantryBoard,	Ft Benning,	Georgia			£.	Institute of	Surgical Res-	earch, Ft Sam	Houston, Texas		45.	JeffersonPro-	ving Ground,	Madison,	Indiana		.94	Kwajalein	Missile Range,	Marshall	Islands	

1/ Exclusive of Military Personnel and Military Construction

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARM INSTALLATION ANALYSIS - IN-HOUSE

1				اء				1)5	99	763	53		13	3	01	10	0		105	27	98	98	98		55	1,2	, 3	122	22
				Total			,	'n	10	76	97	97		-				_		10	.,	10	10	51		13	7	17	12	12
Dare	1010			Other				•	•	•	•	,		•	•	•	,	•		•	•	•	•	•		•	•	•	•	•
		ų		Work				713	65	240	240	240		7	7	4	4	4		34	7	27	27	27		99	15	59	59	59
lan Ye	Paid	From	Other	Funds				•	•	•	•	•		•	•	•	•	•		,	•	•	•	,		•	•	,	,	•
PERSONNEL (Man Years)	Paid			RDTE				•	•	•	•	•			•	•	•	•					•	•			•			•
PERSO	i	Paid	From	Other				•	•	•	•	•		•	•	•	•	•		•	•	,	•	•		•	•	,		,
Porutos	aid			RDTE				•	•	•	•	•		•	•	•	•	•		•	•	•	•	•		•	•	•	•	•
Civil				RDTE			171	194	07	526	223	223		9	7	9	9	9		7.1	20	81	81	81		66	27	84	63	63
				Total				8,240	2,272	9,212	802,6	9,508		237	84	196	199	200		3,206	988	3,139	3,087	3,055		2,441	206	2,504	2,419	2,507
			Pers.	Other					•	•		•			•	•	٠			•		•	•	•		•	•	•		
			Mil. P	RDTE 0			010	5,319	732	2,952	2,923	2,923		92	11	45	45	45		370	79	307	304	304		610	169	670	663	663
ous ands)				Subtotal				6,22/	1,540	6,260	6,785	6,585		191	37	151	154	155		2,836	807	2,832	2,783	2,751		1,831	738	1,834	1,756	1,844
TOA (\$ in Thousands)		A11		Funds 1/				99	15	09	65	65		•		•	•			237	09	218	200	200						
TOP				DOD					•		•	•		•	•	•	•	•		•	•	•	•	•		•	•	•	•	•
		91	Other (Army					•	•					•	•	•							٠				•		
		RD	Mgmt.	Bureau				6,159	1,525	6,200	6,720	6,520		191	37	151	154	155		2,599	747	2,614	2,583	2,551		1,831	738	1,834	1,756	1,844
		į		리			1	16	ğ	77	78	19		9/	2	17	78	79		9/	2	17	78	19		9/	ŢĢ	11	78	79
		Installation	and	Location	dustrial Fund	Installations	. /4	LettermanArmy	Institute of	Research, San	Francisco,	California	.84	Liaison Field	Offices,	Various	Locations		.64	Medical Bio-	Engineering	R&DLaboratory,	Ft Detrick,	Maryland	50.	Medical R&D	Command,	Washington, DC		

1/ Exclusive of Military Personnel and Military Construction

DEPARTMENT OF DEFENSE, MILITARY

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY	INSTALLATION ANALYSIS - IN-HOUSE
	Section 4 (Contd)

1					
	Total	439 129 512 512 512 512	1,403 354 1,437 1,470 1,466	585 146 615 622 619	481 120 483 484
Pers.	Other				
انالہ	In RDTE Work 0	254 79 315 315 315	65 16 98 133 128	67 17 84 91 88	28 28 24 19
tor M	t. ml				
PERSONNEL (Man Years e Contractor Mi	Paid From From Other RDTE Funds				30 7 7 40 40
CONNE			-1 ×0 ×0 -+ ×0		
PER	Paid From Other		421 106 425 424 424		
Service	From Other RDTE		11 2 13 13		19 20 20 20 20
Civil Ser	From F RDTE R	185 50 197 197 197	906 900 900 900	518 129 531 531 531	404 101 405 405 405
١٩١		6 4 6 6 5	17227	0 1 8 3 2 5	5 8 8 5 5 5 8 5 5 5
	Total	9,973 2,684 11,089 11,159 11,285	29,321 8,147 31,862 34,112 36,097	17,032 4,963 18,488 18,941 19,370	20,453 5,489 20,938 21,065 21,375
	ler (s				
	. Pers.	9696	80 E V V	01486	₹ 6 8 0 4
	M11.	2,766 889 3,576 3,541 3,541	708 180 1,113 1,495 1,439	730 191 954 1,023 989	305 79 318 270 214
ands)	Subtotal	7,207 1,795 7,513 7,618	28, 613 7, 967 30, 749 32, 617 34, 658	16,302 4,772 17,534 17,918 18,381	20,148 5,410 20,620 20,795 21,161
Thous		,,,,,,	28, 7, 30, 32,	16, 17, 17,	20, 5, 20, 20,
TOA (\$ in Thousands)	All Other Funds 1/	153 38 155 175 175	10,048 2,852 10,226 10,853 11,524	1,208 211 86 86 86 86	2,138 127 252 594 750
TOA					
	Other DOD		422 100 500 450 600	94	487 101 500 500 500
	RDTE Funds Other		1,007 200 1,600 1,500 1,600		1,650 91 1,610 1,500 1,500
	RDTE	554 558 443 69		000 159 148 132	
	Mgmt . Bureau	7,054 1,757 7,358 7,443 7,569	17,136 4,815 18,423 19,814 20,934	15,000 4,559 17,448 17,832 18,295	15,873 5,091 18,258 18,201 18,411
	≧ I	76 77 78 78	5 5 7 8 6 7	. 76 77 87 87 87	75 77 87 87
	Installation and Location Army Non-In- dustrial Fund Installations	Medical Res- earchInstitute of Infectious Diseases, Ft Detrick,	52. MobilityEquip- 76 mentR&DCenter, TQ Ft Belvoir, 77 Virginia 78	53. Natick Labora- tories, Natick, Massachusetts	Night Vision Laboratory, Ft Belvoir, Virginia

 $\underline{1}/$ Exclusive of Military Personnel and Military Construction

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARM INSTALIATION ANALYSIS - IN-HOUSE

		Total		11	3	12	11	11		216	69	258	797	797			157	41	161	161	191		240	19	259	259	259
		Other		•	ı		•	•		,			•	•			ı		•				13	m	13	13	13
irs)	된							•		16	2	15	21	21			77	21	82	82	82		46	11	77	77	\$
an Yea	Paid From	Other		•	•		•	•			•	•	•	•						١	•			ı	•	•	•
PERSONNEL (Man Years)	Paid F	From O RDTE F		•	,	,	,	,		,		,	,	•						,			,	,		,	
PERSON	Paid	From		,	•	,	,	•		,	,	•	•	•			•	•		•		;	91	23	112	112	112
		Other F RDTE C			•	•	•	•		•	•	•	,	•				,		•	,		•	•	ı	•	•
	Paid P From F	Army O		11	3	12	11	11		200	49	243	243	243			80	20	79	19	42		06	54	90	90	96
		Total		889	295	837	712	702		6,693	2,113	8,833	9,311	10,075			4,378	1,116	4,477	4,640	4,696		3,776	971	3,848	3,901	4,051
		Pers.		•	•	•	•	•		•	•	•		•			•	•	1		•		142	34	148	146	146
		MII. Pe	}		•	•	•	•		174	26	170	236	236			838	236	931	922	922		501	124	200	495	495
TOA (\$ in Thousands)		Subtotal		889	295	837	712	702		6,519	2,057	8,663	9,075	6,839			3,540	880	3,546	3,718	3,774		3,133	813	3,200	3,260	3,410
(\$ in T	A11	Other Funds 1/		•	•	•	•	•		œ	•	49					97	10	25	25	25			•		•	
TOA		Other C	1	•	•	•				•	•	•	•				•	•	•	•			•	•	•	•	
	RDTE Funds		'	226	144	347	226	222		2		30		•							•		•		•		•
	RDI	Mgmt. Bureau		462	151	490	486	480		6,506	2,057	8,569	9,075	6,836			3,494	870	3,521	3,693	3,749		3,133	813	3,200	3,260	3,410
		2	1	9/	2	11	78	79		16	2	11	,78	19			16	TQ	11	78	19		26	20	17	78	79
	Installation	and Location	Army Non-In- dustrial Fund Installations	Office, Chief	of Engineers,	Washington,	DC		56.	ResearchInsti- 76	tute for the	Behavioral &	SocialSciences, 78	Arlington,	Virginia	57.	ResearchInsti- 76	tute of Envir- TQ	ommental Med-	icine, Natick,	Massachusetts	58.	Satellite Com-	munications	Agency, Ft	Monmouth,	New Jersey

 $\underline{1}/$ Exclusive of Military Personnel and Military Construction

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARM INSTALLATION ANALYSIS - IN-HOUSE

1		Total		2	٦,	2	7	2		9	2	9	9	9		23	7	27	27	27		8/1	225	188	1,186	160	
1,							,																				
Pers		Other																						2	27	2	
Mil.	In	Work		2	7	2	2	2		2	1	2	2	2		9	7	9	9	9	,	90	17	95	101	96	
Man Yes	From	Funds		,	•	•		,		,	1	•	•	•		•	•	•	•	•			•	•	1	•	
PERSONNEL (Man Years) e Contractor Mi Paid		RDTE F		•	•		•	•			•							•	•	•		•				•	
PERSON	Paid	Other		•	•	•	١	•		•		•	•	•		•	•	٠	•	•	0	300	89	477	477	477	
ervic		RDIE		•	•		ı	ı		1	•	,	,	,			•			,	,	2	n	23	36	33	
Civil Service Paid Paid		RDTE RD		,	,		,			4	7	4	4	4		17	2	21	21	21		436	137	999	545	527	
1	14			38	15	38	40	07		40	15	04	42	42		623	56	80	80	80		33	27	70	79	83	
		Total														9	1	9	9	9		8.17	7,2	38,5	38,6	35,683	
	Pers.	Other		•	•	•	•	•		•		•		•		•	•	•	•	•		1	•	307	304	304	
		RDTE		22	11	22	22	22		22	11	22	22	22		65	23	67	67	29		119	191	1,078	1,135	1,079	
TOA (\$ in Thousands)		Subtotal		16	4	16	18	18		18	7	18	20	70		558	171	613	613	613		7,114	7,036	7,119	7,225	34,300	
n Tho				,		,	,	,		,	,	,	,	,						,							
(\$ 1)	All Other	Funds 1/																				10,200	1,60	13,50	13,500	13,500	
TO	Other			٠	٠	•	•	•		•	•	•	•	•		•	•	•	•	•		564	133	841	1,265	809	
	RDTE Funds Other	Army		,	٠		•			•	•	•	•	•		•	•	•	•	٠		303	134	258	325	325	
	RDT.	Bureau		16	4	16	18	18		18	4	18	20	20		558	171	613	613	613		16,347	5,169	2.520	2,135	19,867	
1	Σ	到		92	TO	11	78	19		16	ğ	77	78	61		92	2	77	78	64						1 64	
	Installation	ion n-In- l Fund	Installations 59.	ndard-	ization Group,	Australia			.09	Standard-	fzation Group,				61.	Standard-	ization Group,				62.	TankAutomotive 76	Command, Warren, TQ	Michigan			

1/ Exclusive of Military Personnel and Military Construction

DEPARTMENT OF DEFENSE, MILITARY RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY INSTALLATION ANALYSIS - IN-HOUSE

1			al			389	16	389	688	688		287	144	+27	427	+27		00	2	6	6	6		
	انہ		r Total					•	•						301 7			-		2	2	2		
	. Pers	- н н	k Other			99	16	99	9	99		- 4]	- 10	- 30	- 30	- 3(1		1			
Years)	r Mil	In r RDTE	s Work	-		9 -	-	9 -	9 -	9.			,	,				,		,	,	,		
(Man	Contractor	d From																						
PERSONNEL (Man Years)	Con	Paid										_	7		0									
PERS	ice	Paid	Other							•		177	. 42	126	126	126		•	•					
	Civil Service Pald Paid	From	RDTE			•	•	,	,	,		•	•	,	•	•		•	•		•	•		
	Civil	From	RDIE			323	81	323	323	323		•	•	•	•	•		7	2	7	7	7		
			Total			10,834	3,450	11,835	12,766	13,051		15,308	4,575	12,239	12,273	12,444		271	65	283	282	282		
		Pers.	Other				•	•		1		797,	1,148	,417	3,384	,384		11	ı	23	22	22		
		M11. P	RDTE 0			719	180	149	742	742		7 -	- 1	- 3	- 3	- 3			•	1	•	•		
TOA (\$ in Thousands)			Subtotal			10,115	3,270	11,086	12,024	12,309		10,844	3,427	8,822	8,889	090'6		260	65	260	260	260		
A (\$ in ?		All	Funds 1/			,	1	•	•	•		9,845	3,196	7,283	8,254	8,254		•	•	•	1	•		
TO		Other				•	•	•	•	٠		•	•	•	1	,		•	•	•	•	*		
		RDTE Funds				•	•		•	•			•	•	•	•		•	•	•	•	•		
		Momt.	Bureau			10,115	3,270	11,086	12,024	12,309		666	231	1,539	635	908		260	65	260	260	260		
			FY			16	OI P	. 77	78	79		9/	2	77	78	79		9/	13	77	78	79		
		Installation	Location	Army Non-In- dustrial Fund Installations	63.	Test & Eval-	uationCommand	Headquarters	Aberdeen,	Maryland	64. 2/	TRADOC COM-	bined Arms	TestActivity	(TCAIA), Ft	Hood, Texas	65. 3/	TRADOC Com-	bined Arms	TestActivity	(TCAIC)	Support	Office, Ft	Hood, Texas

Exclusive of Military Personnel and Military Construction TRADOC Activity
DARCOM Activity નાતાના

64

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMI INSTALLATION ANALYSIS - IN-HOUSE

				Total								109	109		240	61	797	797	797				149	37	144	144	144
	Pers.			Other								•	•		13	3	13	13	13				•	•	•	•	•
rs)	Mil. P	In		Work 0								109	109		94	11	77	7,7	77				80	20	82	82	82
an Yea	1	From	Other	Funds								1	1		1	•			•				٠	•	•		•
PERSONNEL (Man Years	Contractor	Paid F		RDIE F														•					•	•			•
PERSON	e le	Paid	From	Other								1	•		91	23	112	112	112				•	•	•	•	•
	ervic			- 1									ı		•	1							•	,			
	Civil Service Paid Paid	From From		RDTE RDTE									1		96	24	95	95	95				69	17	62	62	62
				Total								1,956	1,956		5,845	1,568	7,000	6,270	6,270				2,984	809	3,068	3,177	3,177
			Pers.	Other						~					142	34	148	146	146						•		
				RDTE						FY 1978		1,225	1,225		501	124	200	495	495				871	225	931	922	925
TOA (\$ in Thousands)				Subtotal						TRADOC R&D effort to be initiated in FY 1978		731	731		5,202	1,410	6,352	5,629	5,629				2,113	584	2,137	2,255	2,255
in Th				1/8						init			,			,								1			
A (\$		A11	Othe	Funds 1/						to be																	
TO,		8		DOD						effort		•	•		1,203	222	899	725	725				•	•	•	•	•
		RDTE Funds	Other	Army						C R&D		•	•		450	300	1,951	1,085	1,085				•	•	•	•	•
		RD	Mgmt.	Bureau						TRAD		731	731		3,549	888	3,733	3,819	3,819				2,113	584	2,137	2,255	2,255
				FY					9/4	2	77	78	79		16	g	11	78	19				16	2	11	78	62
		Installation	and	Location	Army Non-In-	dustrial Fund	Installations	. 99	TRADOC Security76	Board, Ft	Huachuca,	Arizona		29	Tri-Service	Tactical Com-	munications	Systems (TRI-	TAC), Ft	Monmouth, New	Jersey	. 89	Tropic Test	Center, Panama,	Canal Zone		

 $\underline{1}/$ Exclusive of Military Personnel and Military Construction

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARM INSTALLATION ANALYSIS - IN-HOUSE

	8.	1			er Total			066 -	- 263	- 1,026	- 1,030	- 1,030		1 4,767	- 1,169	1 4,695	1 4,754	1 4,736		50 1,200	15 303			
ars)	Mil. Pers.		In	RDTE	Work Other			523	131	526	526	526		931	233	926	956	956			76			
PERSONNEL (Man Years	Contractor	Paid	From	Other	Funds			•	•	•	•						153			•	•		•	•
ONNEL	Cont		Paid	Fron	RDTE			i									870						•	
PERS	ice		Paid		Other			•	•	•	'	•		21	5	21	21	21		•	•	•	•	
	1 Service	Paid Paid	From	Other	RDTE			•	•	,	•	•		•	•	•	•	•		•	•	•		•
	Civil	Paid	From	Army	RDTE				132					2,874			2,753				212			
					Total			21,668	5,456	22,111	22,362	22,639		95,196	28,678	111,218	120,185	132,73		26,299	6,682	28,547	30,093	31,755
				Pers.	RDTE Other			٠	•	•	•	•		11	•	11	11	11		244	169	692	989	989
)				Mil.	RDTE			5,695	1,474	5,971	5,913	5,913		10,137	2,622	10,853	10,747	10,747		3,321	006	3,939	3,901	3,901
TOA (\$ in Thousands					Subtotal			15,973	3,982	16,140	16,449	16,726		85,048	26,056	100,354	109,427	121,998		22,434	5,613	23,916	25,506	27,168
A (\$ in			A11	Other	Funds 1/			70	20	240	250	250		2,600	852	7,608	6,569	7,000		2,792	614	3,174	3,395	4.374
TC			S	Other	DOD			•	•	•	•	•					3,279	3,500		1,681	411	914	747	772
			RDTE Funds	Other	Army			•	•	•	•	•			3,643		_	22,500		•	•	•	•	•
			RL	Mgmt.	Bureau			15,933	3,962	15,900	16,199	16,476		62,853	19,894	78,640	86,890	88,998		17,961	4,723	19,828	21,364	22,022
					김			16	, IQ	11	18	19		16	2	77	78	19		9/	2	77	78	4
			Installation	and	Location	Army Non-In- dustrial Fund	Installations 69.	Walter Reed	R&DActivities,	Washington,	DC		70.	White Sands	Missile Range,	Las Cruces,	New Mexico		71.	Yuma Proving	Ground, Yuma,	Arizona		

1/ Exclusive of Military Personnel and Military Construction

DEPARTMENT OF DEFENSE, MILITARY RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARM INSTALLATION ANALYSIS - IN-HOUSE

	Total	26,984 6,748 27,247 27,415 27,284	41,516 10,257 41,457 41,658 41,537
ers.	Other	551 2 140 488 2 488 2 488 2	647 4 165 1 573 4 574 4 574 4
s) i1. Pe	In RDTE Work Ot	5,668 1,433 5,954 6,131 6,083	6,402 1,621 6,834 6,983 6,941
Year	L ml		
Man acto	From Other Funds	501 119 491 515 512	518 121 511 539 512
PERSONNEL (Man Years) e Contractor Mil. Pers	Paid From From Other RDTE Funds	3,837 981 3,852 3,840 3,822	4,026 981 3,986 3,940 3,823
∞ l	Paid From Other	796 1,277 3,837 167 314 981 733 1,435 3,852 726 1,442 3,840 680 1,446 3,822	5,450 4,026 1,318 981 5,613 3,986 5,606 3,940 5,610 3,823
Servi	ы I .	796 167 733 726 680	958 199 872 892 891
Civil Service	From Army (RDTE)	14,354 3,594 14,294 14,273 14,253	23,515 5,852 23,068 23,124 23,246
	Total	650,851 14,354 192,398 3,594 705,006 14,294 742,640 14,273 767,346 14,253	69,670 7,047 1,032,741 23,515 18,683 1,858 286,359 5,852 78,397 6,506 1,068,223 23,068 79,354 6,452 1,109,814 23,124 78,837 6,452 1,148,897 23,246
	ers.	6,001 1,576 5,541 5,486 5,486	,047 1 ,858 ,506 1 ,452 1
	Mil. Pers. RDTE Other	61,678 6 16,568 1 68,408 5 69,776 5	59,670 7 18,683 1 18,397 6 9,354 6 18,837 6 18,837 6
TOA (\$ in Thousands)	Subtotal	583,172 174,254 631,057 667,378 692,691	956,024 265,818 983,320 024,008 063,608
A (\$ in 7	All Other Funds 1/	59,090 16,177 58,749 61,242 62,944	43,375 160,053 10,310 36,651 42,036 138,506 37,933 143,758 1 34,065 145,130 1
T	Other DOD	25,244 6,013 21,423 21,821 21,427	43,375 10,310 42,036 37,933 34,065
	RDIE Funds Other Army	76 463,064 35,774 TQ 141,522 10,542 77 512,468 38,417 78 543,507 40,808 79 556,682 51,638	76 711,004 41,592 4 TQ 207,432 11,425 1 77 758,753 44,025 7 78 796,898 45,419 7 79 827,305 57,108
	Mgmt. Burea	463,064 141,522 512,468 543,507 556,682	711,004 207,432 758,753 796,898 827,305
	옶	76 77 78 79	75 77 86 79
	Installation and Location Army Non-In-dustrial Fund Installations	Subtotal, Army Non-Industrial Fund Instal- lations	TOTAL, IN- HOUSE

1/ Exclusive of Military Personnel and Military Construction

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARM ANALYSIS OF REINBURSABLE PROGRAM (\$ in Thousands)

Section 5

FY 1976 FY 1977 FY 1978 Actual Estimate Estimate Estimate	\$185,125 \$21,084 \$177,900 \$196,000	8,521 1,959 9,500 22.478 2.865 20.000	2,285 866 4,300 2,300 795 3,200	4,215 2,680 11,700 1,156 2,172 1,500	5,769 993 5,500	 75,929	007 067 007	582 1,255 700	2,001 2,399 2,800	754 273 1,700	372 176 400	668 126 400	13,326 4,404 9,897	1,326 620 1,803	1,105	20,976 10,489 21,100 23,000	\$282.030 \$49.334 \$280.000 \$300.000
FY 1976 Actual	\$185,125					 											\$282.030
		Other Department of Defense Components Department of the Navy		Agency			Activities Outside Department of Defense Consumer Product Safety Commission	uo	pment Adminis	gency	Space Adminis						

ANALYSIS OF REIMBURSABLE PROGRAM

DESCRIPTION OF REIMBURSABLE WORK

Orders are also received for Research, Development, Test, and Evaluation efforts from other bureaus or agencies of the Government A large portion of the RDTE reimbursable program is for intra-Army work or services under the automatic reimbursement procedure. on a reimbursable basis, such as:

- a. Navy Night Sights for Surveillance; Safer Flame Agents; Aircraft Survivability; Remotely Piloted Vehicle Engines; Laboratory Research Cooperative Program Scientific Services; Joint Service Testing TRI-TAC; Ordnance Detection Main Support; and Advance Transmission Control Components.
- b. Air Force Modular Kits and Alarms; AN/TTC 39 and Air Force Drone Program; Joint Service Testing TRI-TAG; Structure Feasibility; Air Defense Targets; Aircraft Vulnerable Areas; Gun Systems Effectiveness Comparison; Seismic/Acoustic Analysis; Terrain Target Analysis; and Optimum Use of Energy in Military Facilities.
- Marine Corps Advanced Development of 105mm Encapsulated Flame Round; Water and Soil Analysis; and Cargo Handling.
- d. Office, Secretary of Defense Laser Guided Weapon Chemical Test.
- Advanced Research Projects Agency Warhead technology in-house support of various Defense Advanced Research Projects Agency projects.
- Defense Communications Agency TRI-Service Propagation Program and Electro-Magnetic Pulse effects.

and the

4 ;

- g. Defense Mapping Agency Purchase of Automatic Data Processing Systems; Photography, US Army Avionics Laboratory Terrain Model and support of: photogrammetric exploitation, cartographic exploitation, geodetic and geophysical support, data base/data bank and products and services.
- Defense Nuclear Agency DICE THROW; Ground Motion Studies; Materiel Modeling; Grout Development; Nuclear Weapons Effects Program; Ice Cap; Perimeter Barrier Penetration Test; and Direct Test Support Blast Effects.
- National Security Agency Joint Service Testing; Support of Electronic Warfare Testing; and Human Engineering Support.
- j. Consumer Product Safety Commission Analysis of consumer products.
- Department of Transportation Development of Math Model; Haul Road Study; Tank Car Study; and Flywheel Application Study.

ANALYSIS OF REIMBURSABLE PROGRAM

- 1. Energy Research and Development Administration Grout Studies; High Temperature Dust Control; Support Sandia Base; Airborne Particles; and Heat Energy Highway Systems.
- m. Environmental Protection Agency Oil Movement and Ice Fog Studies; Technical Support to Office of Noise Abatement and Control; Health Effects Associated with Spray Irrigation of Wastewater Effluents; New Microbial Indicators of Disinfection Efficiency; and Testing Biological Effects of Microwave.
- n. National Aeronautical and Space Administration Electrochemical Biocide Study and Support of Contract with Philoo Ford Corporation on Electronic Research.
- o. US Coast Guard Low Cost Radiological Instrumentation; Radar Flight Test Program; Lifeboat Heat Test; Life Raft Test; Night Sights for Surveillance; and Wide Area Illumination.
- p. Department of Commerce Subsea Permafrost; Remote Sensing; and Shear Zone.

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY FEDERAL CONTRACT RESEARCH CENTERS

Section 6

scientific effort necessary to supplement that available in the Army. The centers listed are those sponsored by the Department of Defense which provide technical and management services in the management of the Army's programs. These centers provide independent, specialized, technical and scientific capabilities to supplement that available within the Department of the Army These centers provide Federal Contract Research Centers (FCRCs) are those organizations primarily engaged in providing specialized technical and

cannot be immediately obtained elsewhere. Long association with the Department of Defense enables these centers to render quick response technical advisory service as well as to perform detailed research and analysis. This long association has tailored These research centers possess unique skills and capabilities resulting from the development of highly specialized association and practical experience with the Army. The in-depth background provides the Army with a research capability that FCRCs have been established to permit more organizational flexibility, and greater availability of technical and scientific professional staff intimately acquainted with the many facets of the Army's mission. This capability results from long these research centers to be compatible with Army interests, procedures and operational requirements. personnel.

While the Army no longer sponsors an FCRC it will be necessary to continue research and development effort at FCRCs sponsored by the Department of Defense and the other services. These research and development contracts provide timely and innovative products and techniques appropriate to current and long-range Army missions and plans.

The requested FY 1978 and FY 1979 FCRC requirements reflect increases of \$1.1 million comparing FY 1978 to FY 1977 and \$1.3 million when comparing FY 1979 to FY 1978.

FEDERAL CONTRACT RESEARCH CENTER

The following summary identifies the estimated work, excluding subcontract effort, to be placed with each Federal Contract Research Center (FCRC) from the Research, Development, Test, and Evaluation, Army appropriation and from the other Army appropriations.

SUMMARY BY APPROPRICTION AND PROCRAM ELEMENT

ı		
i		
ł		
I		
1		
	_	
	-	
	-03	
	∇	
	æ	
	S	
ı	3	
ı	0	
ı	-	
١	E	
۱		
۱	-	
۱	ŗ	
ı		
ı		
ı	31	
ı	_	
ı		
Į		
ı		
ĺ		
ı		
۱		
۱		
۱		
ı		
ı		
۱		
۱		

FEDERAL CONTRACT RESEARCH CENTER/APPROPRIATION/PROGRAM ELEMENT	ACTUAL	FY 19TQ ESTIMATE	ESTIMATE	FY 1978 ESTIMATE	FY 1979 ESTIMATE
AEROS PACE CORPORATION					
Research, Development, Test, and Evaluation, Army					
6.21.05.A Materials	52			•	
6.27.07.A Mapping and Geodesy	20	10		24	27
	120		150	225	
	* 025	210 *	¥ 00 <i>L</i>	1,200 *	
High Energy Laser	•		20	20	95
6.37.30.A Tactical Surveillance System	643	100	250	320	
6.47.40.A Tactical Surveillance System	1	1	1	1	1
Total RDTE, Army	999	182	850	776	1,048
Total RDTE, Army Included in Air Force Ceiling	570	210	700	1,200	1,260
Total Aerospace Corporation	1,235	392	1,550	2,144	2,308
* Program funded by Army but included in Air Force ceiling.					

Remarks: The expertise and facilities of Aerospace Corporation are required to support the Army as follows:

1. Materials - The technical expertise of Aerospace Corporation is needed to support ongoing high urgency research efforts directed towards new Army aircraft and weapons systems. Without the technical expertise of Aerospace Corporation efforts relative to new sophisticated materials and systems will suffer serious time loss in the areas of gear materials, high density penetrators and metal matrix composites.

FEDERAL CONTRACT RESEARCH CENTERS

SUMMARY BY APPROPRIATION AND PROCRAM ELEMENT (\$ 1n Thousands)

FEDERAL CONTRACT RESEARCH CENTER/APPROPRIATION/PROGRAM ELEMENT

AEROSPACE CORPORATION (Continued)

- Mapping and Geodesy Aerospace expertise is needed to develop specifications and requirements for hardware and software to interface a prototype system for processing of advanced sensor data. In addition, assistance is needed in development of data processing routines and algorisms. Aerospace is the only source of expertise in advanced data collection systems.
- fundamental processes in D_2 - F_2 lasers for service-related programs. Development of models for these processes is a requirement for later hardware programs at contractor sites. No impact on the program is foreseen if alternative in-house capabilities or 3. High Energy Laser Components - Aerospace Corporation is the leading laboratory in the field of investigating the other contractual sources were to provide the support requested.
- 4. Tactical Electronic Warfare and Surveillance System The Aerospace Corporation will provide level of effort support the US Army Space Program Office (ASPO) in FY 1978. Effort is split into the following areas:
- General System Support will be provided. Studies, both conceptual and hardware oriented, will be identified, scoped and performed according to established milestones. Aerospace will help develop a

Long-range planning and briefing support, both personnel and material will be provided.

- General System Engineering/Technical Direction in support of simulation development and documentation and in support of other contractor efforts to be defined will be provided.
- . Aerospace will modify and exercise several
- Aerospace will provide technical support and perform system studies in support of Army field evaluations. ď.
- e. Aerospace will provide

FEDERAL CONTRACT RESEARCH CENTERS

SUMMARY BY APPROPRIATION AND PROGRAM ELEMENT (\$ in Thousands)

FEDERAL CONTRACT RESEARCH CENTER/APPROPRIATION/PROCRAM ELEMENT

AEROSPACE CORPORATION (Continued)

- objective of providing a set of requirements mutually beneficial to both classes of missions. Support will also be provided to During the Air Force Space and Missile System Organization in procurement and integration of secondary payloads. Similar support has been provided in the past for other Ballistic Missile Defense Advanced Technology Center programs including earlier Reentry FY 1978, this effort will address the interface between Ballistic Missile Defense missions and Air Force missions with the Aerospace Corporation - The Aerospace Corporation provides interface and planning support for joint Army/Air Force research and development efforts mutually beneficial to the ballistic missile defense/strategic offense force missions. Measurements Program phases and the Special Target Program Phase.
- Ballistic Missile Defense Systems Technology Program (program funded by the Army but included in Air Force ceiling):
- a. The Air Force will be the procuring agency for the Systems Technology Intercontinental Ballistic Missile (ICBM) targets. Target requirements are placed on the Air Force through formal channels and are funded by MIPR. The Air Force is required to procure targets for testing for all services as a matter of DOD policy.
- The Air Force uses Aerospace Corporation for technical support. Justification and man year requirements are established tasks, Aerospace also supports the Air Force in the area of program planning and by performing in-house studies. In providing targets for Systems Technology, the Air Force will rely on Aerospace Members of the Technical Staff (MIS) to perform tasks by the Air Force based on projected Systems Technology target requirements. The technical support includes preparation of contractual documents, proposal evaluation, and providing technical direction to Air Force contractors. In addition to these
- During the FY 1977, Aerospace will support the Air Force in the payload integration and missile preparation for two launched in FY 1979. Initial payload to booster integration will be performed in preparation of two missions using updated missions made up of SAFEGUARD surplus hardware to support Systems Technology program requirements. These missions will be MINUTEMAN-I Minuteman Instrumented Payload Delivery System (MIPDS) hardware.
- missile and a payload which meets Systems Technology program requirements will be prepared and launched. Also, mission design In FY 1978 Aerospace will support the Air Force in scheduling range support, preparing for launch and launching two MINUTEMAN-I missions to meet Systems Technology program requirements. One mission using a MINUTEMAN-I MIPDS demonstration and payload to booster integration support will be provided for a MINUTEMAN-I MIPDS mission to be launched in FY 1979. Aerospace will support the Systems Technology contractor in the areas of mission planning and mission design.

FEDERAL CONTRACT RESEARCH CENTERS

SUMMARY BY APPROPRIATION AND PROGRAM ELEMENT (\$ in Thousands)

FEDERAL CONTRACT RESEARCH CENTER/APPROPRIATION/PROGRAM ELEMENT	FY 1976 ACTUAL	FY 19TQ ESTIMATE	FY 1977 ESTIMATE	FY 1978 ESTIMATE	FY 1979 ESTIMATE
LINCOLN LABORATORY, MASSACHUSETTS INSTITUTE OF TECHNOLOGY					
Research, Development, Test, and Evaluation, Army					
6.33.04.A Ballistic Missile Defense Advanced Technology Program 6.33.14.A High Energy Laser Components 6.53.01.A Kwajalein Missile Range (KMR)	6,861	1,770	7,149 350 3,171	7,435 368 3,294	7,881 390 3,492
Total RDIE, Army.	10,110	2,595	10,670	11,097	11,763
Total Lincoln Laboratory, Massachusetts Institute of Technology	10,110	2,595	10,670	11,097	11,763
Subcontract effort excluded from this amount	11,898	2,681	10,159	10,912	11,467
Remarks: Work to be performed at the Lincoln Laboratories is as follows:					

1. Ballistic Missile Defense Advanced Technology Program

Continue !

- exoatmospheric designation and discrimination engineering and radar data analysis and interpretation. A computer has been installed at the Lexington, Mass. laboratory and various designation and discrimination (D&D) algorithms have been tested in simulation. Kiernan Reentry Measurements Site (KREMS) data from future Reentry Measurements Program (RMP) missions and data from Air Force and Navy missions will be utilized in FY 1978 for evaluation of Discrimination Algorithms at the Lexington, Mass. a. Discrimination technology effort includes work in reentry discrimination, bulk filtering, bulk discrimination, laboratory.
- b. Radar technology effort includes work in millimeter-wave components, laser components, large band-width signal processing, antenna technology, surface wave technology, and array development.

FEDERAL CONTRACT RESEARCH CENTERS

SUMMARY BY APPROPRIATION AND PROCRAM ELEMENT (\$ in Thousands)

FEDERAL CONTRACT RESEARCH CENTER/APPROPRIATION/PROGRAM ELEMENT

LINCOLN LABORATORY, MASSACHUSETTS INSTITUTE OF TECHNOLOGY (Continued)

- time optics/radar handover experiments will be completed and preparations will be made for real time handover experiments in measurement facility is being constructed and will be installed and checked out at Kwajalein Missile Range (KDR) in FY 1977. Operation of the Army Optical Station on Roi Namur will continue to expand the data base on targets of opportunity. Nonreal Optics technology effort includes laser measurements, passive optics measurements, and handover experiments.
- d. Distributed defense technology effort consists of modification of concepts developed during previous studies to incorporate the results of technology developments and data collection efforts. Nonnuclear requirements and capabilities of these concepts will be determined. Electronic countermeasures responses will be developed. Other requirements to be addressed include redundancy, data association, trilateration tracking, battle management and engagement logic.
- requirements will have been identified already; this task will be for the purpose of determining specific items and capabilities which a tactical system must have. The effort will involve trade-off studies for different approaches, investigation of other group can make an immediate and telling impact on the Army's HEL program. In addition, Lincoln Laboratory does not compete with contractors and so can evaluate ideas and approaches without prejudice. No other group, in industry or in government, has the and tracking for HEL Systems. There exists at Lincoln Laboratory a wealth of expertise in these two areas and in related areas. 2. High Energy Laser Components - (Task I) - Evaluate high energy repetively pulsed laser propagation and specifically the capabilities of special optics techniques as applied to pulsed lasers. Also, to assist in implementation and testing of a high power demonstration of optics system. Specific efforts will include range layout, measurement of beam quality, etc., and General categories of Lincoln personnel have been intimately involved in all technical aspects of the overall DOD laser effort, and therefore, this capability to perform evaluations and design experiments in the areas of high energy laser (HEL) propagation and in pointing service programs which bear on Army problems, and/or development of new ideas as necessary. Lincoln Laboratory has a unique Dackground and expertise which Lincoln Laboratory can bring to bear on the tasks outlined in this description. (Task II) - Assist the Army in defining requirements for a high energy laser system. analysis of data.

FEDERAL CONTRACT RESEARCH CENTERS

SUMMARY BY APPROPRIATION AND PROGRAM ELEMENT (\$ in Thousands)

FEDERAL CONTRACT RESEARCH CENTER/APPROPRIATION/PROCRAM ELEMENT

LINCOLN LABORATORY, MASSACHUSETTS INSTITUTE OF TECHNOLOGY (Continued)

- . Kwajalein Missile Range (KMR)
- a. The Kiernan Reentry Measurements Site (KREMS) radars were developed by the Massachusetts Institute of Technology/ Lincoln Laboratory (MIT/LL) under Advanced Research Projects Agency (ARPA) sponsorship, and by direction of the Director, Defense Research and Engineering, transferred to the Kwajalein Missile Range Directorate (KMED) of the Ballistic Missile Defense Systems Command (BMDSCOM) in 1968 to support the National Range mission.
- They provide the technical management of the overall KREMS instrumentation system which includes three very unique and MIT/LL serves as Scientific Director of KREMS at KWR, and they are considered predominant experts for this particular Additionally, MIT/LL performs the offsite mission test planning, radar systems engineering, and data reduction and reporting complex radar sensors and their associated display, control, and recording equipments in support of mission operations. task.
- c. Their overall efforts are pursuant to the objective of providing an integrated operation with multiple sensors whose total spectrum of capabilities will allow the collection of data for both strategic offensive and defensive weapon system development and which will function as an extremely flexible test bed for experiments on Advanced Ballistic Missile system techniques. The instrumentation system at KREMS is a continually evolving one due to the emphasis on using, in real time, the capabilities of the individual sensors to maximize the total effectiveness for data collection.
- d. KMR does not have the in-house capability to perform this effort. If the effort were sought from other contractual sources, the expertise gained at MIT/LL and nurtured during the last 12 years at government expense would be sacrificed and an unacceptable degradation in the quality and efficiency of support provided testing programs would occur.

FEDERAL CONTRACT RESEARCH CENTERS

SUMMARY BY APPROPRIATION AND PROGRAM ELEMENT (\$ in Thousands)

FEDERAL CONTRACT RESEARCH CENTER/APPROPRIATION/PROGRAM ELEMENT	FY 1976 ACTUAL	FY 19TQ ESTIMATE	FY 1977 ESTIMATE	FY 1978 ESTIMATE	FY 1979 ESTIMATE
MITRE CORPORATION					
Research, Development, Test, and Evaluation, Army					
3.31.45.A USAREUR Command, Control and Information System (CCIS). 6.37.04.A Unattended Ground Sensors	142 405	65 225	100	450 100 2,035	145
Total RDTE, Army	247	290	2,062	2,585	2,930
Operations and Maintenance, Army					
395781 US Army Communications Command	400	103	700	420	009
Total OGM, Army	400	103	400	420	009
Total MITRE Corporation	947	393	2,462	3,005	3,530
Remarks: MITRE Corporation technical support to the Army is required as follows:	llows:				

1. Unattended Ground Sensors - Funds are required during FY 1978 for continuation of support commenced by the MITRE Corporation will continue to provide technical support of advanced development efforts to insure that design of evolutionary components and end items are responsible to system requirements in a cost effective manner and are compatible with configuration items in the basic system.

Due to familiarity with the Remotely Monitored Battlefield Sensor System (REMBASS) program over 6 years (FY 1972-1977), no alternative in-house or contractor capabilities can be substituted for MITRE Corporation technical support during FY 1978. Systems engineering support by the MITRE Corporation during this year will be particularly important in new technology to be applied to REMBASS.

FEDERAL CONTRACT RESEARCH CENTERS

SUMMARY BY APPROPRIATION AND PROGRAM ELEMENT

FEDERAL CONTRACT RESEARCH CENTER/APPROPRIATION/FROGRAM ELEMENT

MITTEL CORPORATION (Continued)

Battlefield Systems Integration Office US Army Materiel Development and Readiness Command (DARCOM) - The work programmed communicated in real time to command and control centers where it is instantaneously sorted, collated, displayed and transmitted the MIRE Corporation is to initiate in FY 1976 and carry forward in subsequent years the Army's Battle Systems integration out. This program consists of creative, inter-disciplinary design work treating the Army in the field as a total and to permit battlefield data collected by any sensor (e.g., forward observer, radar, infrared on remotely piloted vehicles) to be acquisition or other weapons operating in the system. An example of failing to exploit fully new technology by not integrating schesive system, integrated so that combat subsystems such as ground forces, organic aerial units and appropriate components of equipment to realize its full technological potential through interoperability with communications, command and control, target the Tactical Air Command of the US Air Force work in a common framework, with each element configured to maximize total system integrated battlefield system can be screened out. A synergistic effect will be achieved in the R&D effort by permitting new battlefield systems is the development of artillery pieces that extend achievable ranges from approximately 15 kilometers to capabilities. There are two complimentary thrusts of activity, carried on simultaneously. The first is the architecture or design of an overall battlefield systems concept. The basis for the design is the conviction that technology is now at hand digitally to maneuver or fire units who will act on it. Such a master design to guide the Army's R&D effort will optimize weapon, C3 and sensor development. New developments that are only marginally effective when viewed in the context of an 30 kilometers, but no coordinated development of target acquisition, communications, and tactical data systems has been conducted to present targets in real time out to those ranges.

several reasons. MITRE has a widely accepted reputation for quality technical work in target acquisition, telecommunications and data processing. MITRE has extensive experience in comprehensive battlefield command and control systems, a level of technical sophistication and tactical application that has never been attempted in the Army before. MIRE's experience has been gained in such projects as Joint Tactical Information Distribution System, World-Wide Military Command and Control Systems, and extensive The MIRE Corporation is considered to be uniquely qualified for the Army's pioneer systems architecture and design program for considered vital and MITRE will contribute synergistically. Finally, MITRE has on board the requisite scientific talent, both in terms of numbers and experience to undertake an Army Battlefield Systems Integration program without undue delay for recruiting or education in defense systems. It is anticipated that a plan for an all-encompassing tactical system can be conceived, analyzed, and trade off studies completed two years from initiation. Interoperability of tactical Army-Air Force systems is work for the Air Force in tactical command and control systems.

FEDERAL CONTRACT RESEARCH CENTERS

SUMMARY BY APPROPRIATION AND PROGRAM ELEMENT (\$ in Thousands)

FEDERAL CONTRACT RESEARCH CENTER/APPROPRIATION/PROGRAM ELEMENT

MITRE CORPORATION (Continued)

A second line of effort focuses on near-term improvements to the Army's combat capability by optimizing tactical subsystems such as field artillery, night combat, air defense and aviation. Each of these functional subsystems have shortfalls that could be corrected by a searching battlefield systems analysis. By virtue of the intensive effort to design an all-encompassing tactical sharpened. As high payoff areas for short term correction are positively identified, teams of 10 to 20 engineers and analysts will be assigned to these areas to develop fully documented program recommendations to give higher priority to certain lines, modify or terminate others, provide guidance for product improvements and input to research and technology development. It is anticipated that FY 1977 up to four functional areas will be undergoing detailed analysis, with a total contractual effort of system, the ability of the in-house staff and contractual designers to identify subsystem shortcomings will be considerably 40-50 professionals.

completed. The successful completion of these tasks is accorded the highest priority by Commander (US Army Materiel Development and Readiness Command, the Under Secretary of the Army, and in OSD). FY 1978 program will encompass the completion of a system architecture for the target acquisition, C3, weapon engagement command and control and assessment subsystems. Implementation \$1.04 million in FY 1977. In FY 1976 major revisions to significant combat subsystems (e.g., artillery and fire support, night as establish common specifications to insure system compatibility and interoperability for future development will be complete. of the systems engineering phase will be initiated and the archtecture effort extended to air defense, air space coordination, a total battlefield system implementation plan, which will optimize weapon, sensor and telecommunications development as well aviation, etc., designed to integrate overall systems. The work will be verified by intensive subsystem studies and tactical testing/experimentation. The FY 1979 program should complete the architecture effort. Systems engineering to implement the building up to 32½ man years and \$2.06 million RDTE in FY 1977. In-house scientific and management support will build up to At the end of FY 1977 In subsequent years all development will be monitored for conformance, and additional subsystems optimization plans will be In summary, MITRE will provide total systems design and architecture support plus command and control subsystems analysis master design will dominate the FY 1979 effort. Additional experimentation to evaluate the integration concept will be combat, aviation, or air defense), were developed, documented and be in the process of implementation.

FEDERAL CONTRACT RESEARCH CENTERS

SUMMARY BY APPROPRIATION AND PROGRAM ELEMENT (\$ in Thousands)

FEDERAL CONTRACT RESEARCH CENTER/APPROPRIATION/PROCRAM ELEMENT

MITRE CORPORATION (Continuing)

Because of the scope and complexity of the systems architecture task, encompassing all tactical developments and including close interface with Air Force capabilities, an experienced in-house team could not be assembled to accomplish this task. There is no precedent in the Army for an undertaking of this magnitude. Other non-FCRC contractors would pose several difficulties. There than MIRE therefore entails considerable delay for negotiation and source selection, followed by several months while the contractor recruits and educates a staff. There is considerable risk that even after six months to a year's delay the resulting Those that do possess this experience are fully committed in similar efforts (e.g., World-Wide Military Command and Control Systems) now. Choosing a company other contractor will not have experienced management and technical people to carry out a large, complex battlefield systems are very few non-FCRC companies with experience in large command and control projects. integration project.

3. Technical Design of a USAREUR Command, Control and Information System (CCIS) - The long-term and some near-term concepts outlined in the USAREUR CCIS study must be translated into specific technical designs that will be the basis for subsequent implementation efforts. MIRE Corporation has been supporting the USAREUR CCIS Study since July 1976. Continuity of effort and efficiency are best achieved if the follow-on efforts are accomplished by MITRE personnel as opposed to an in-house effort The Man-Technical-Staff is projected to be 60 man-months in FY 1978. or another contractor.

.

4

signaling cannot be met. Garrison mission and installation support activities increasingly depend on multimedia communications. The Army does not have the engineering capability to perform tasks involving advanced technology association with multimedia integrated communications-electronics. MITRE access to proprietary information and industry proposals is key to the solution of the best technology and hardware for this program. 4. Army Garrison Communications-Electronics Systems are not responsive to current requirements. The FY 1979-1985 needs for Communications-Electronics facilities to include audio, video, data, facsimile, messages, television and specialized MITRE will provide systems engineering technology support to the Army for test bed implementation.

FEDERAL CONTRACT RESEARCH CENTERS

SUMMARY BY APPROPRIATION AND PROGRAM ELEMENT (\$ in Thousands)

FEDERAL CONTRACT RESEARCH CENTER/APPROPRIATION/PROGRAM ELEMENT	FY 1976 ACTUAL	FY 19TQ ESTIMATE	FY 1977 ESTIMATE	FY 1978 ESTIMATE	FY 1979 ESTIMATE
TOTAL PROGRAM SUMMARY BY APPROPRIATION					
Research, Development, Test, and Evaluation	11,322	3,067	13,582	14,626	15,741
Total Federal Contract Research Center Requirement	11,722	3,170	13,982	15,046	16,341
Subcontract effort excluded from this amount	11,898	2,681	10,159	10,912	11,467

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY MAJOR IMPROVEMENTS TO AND CONSTRUCTION OF GOVERNMENT-OWNED FACILITIES FUNDED BY RDTE, ARMY APPROPRIATION

Section 7

PART 1. UTILIZATION OF SECTION 2353, TITLE 10 AUTHORITY

is executed through DOD Directive 4275.5. Under this policy, construction of R&D projects for contractors up to \$500,000 is normally approved by the Major Command concerned; the Service Secretary or such delegate as he may authorize approves projects up to \$1,000,000; and the Director of Defense Research and Engineering approves projects over \$1,000,000. The table below provides a summary listing of all such projects accomplished in FY 1976, FY 1970, and planned in FY 1977 and FY 1978: research and development, may be constructed by or furnished to the contractor and funded from appropriations available for research, development, test, and evaluation. The Congress enacted this legislation, now 10 USC 2353, in 1956. This policy Specialized R&D facilities determined to be necessary for the performance of a contract for a Military Department for

Project Contractor Location Dv 76 Ev 40 Ev 77		KUIE			Total Sprigational Parily it
Number Contractor Contractor Tourisme Day 16 DV 70 DV 75		Project			(Thousands of Dollars)
Factile Equipment	Facility/Equipment	Number	Contractor	Location	FY 76 FY TQ FY 77 FY 7

SECTION I

Projects Accomplished or Underway

. Projects Accomplished

•	
877	43
White Sands Missile Range, NM	Warren, MI
Raytheon Company	Battelle Memo- rial Institute
1X364307D212	1L662601AH91
a. Supporting Facilities for PATRIOT Fire Control Group	b. Alteration & Construction Bldg 200C for Advanced Concepts Laboratory Contractor Use
ug.	<u>ن</u>

2. Supporting Narrative Statement on Projects of \$300,000 or More

a. This project provided the facilities required for the installation of the PATRIOT Fire Control Group Equipment and Hardware at WSMR to support the Phase II Missile Firing Program. The facilities were provided through existing contracts with Raytheon and the PATRIOT Project Office. The prime facility is a frame structure of 1865 SF. This building will house the A/C equipment, provide access ways to the fire control equipment, and the operations control center. The site work includes

MAJOR IMPROVEMENTS TO AND CONSTRUCTION OF GOVERNMENT-OWNED FACILITIES FUNDED BY RDTE, ARMY APPROPRIATION

Total Obligational Authority	(Thousands of Dollars)	FY 76 FY TQ FY 77 FY 78
		Location
		Contractor
RDTE	Project	Number
		Facility/Equipment

2. Supporting Narrative Statement on Projects of \$300,000 or More (Continued)

erosion. Utilities constructed are primary and secondary electrical distribution and a 725 KVA electrical substation. Work consisted of site preparation, foundation, and installation of two (2) forty foot test towers; a radar liquid cooling unit base, sound barrier and protective cover; and cable trenches using preformed concrete units. In addition, work was performed for the installation of a Radar Unit (RU), Digital Acquisition System (DAS) van, and RU maintenance shelters. This project is not within a known flood plain. DOD "U" factors will be met. construction of an elevated fill area with base and paving. A retaining wall was constructed at the edge of the berm to prevent

b. Major Items Included in Project Accomplished:

aco.N	21017		104.0	31.1		19.0	6.98	6.1	11.5	11.5	30.0	8.06	56.7
	Severable:	Nonseverable:	Operations Support Building	Air Conditioning System	Supporting Facilities:	Site Improvements	Site and Facilities Utilities	Test Towers and Cable Trench	Data Acquisition Center	Fire Sprinkler	Comm & Comm Sec (TEMPEST)	Facilities & Instrumentation Design & Engineering	Miscellaneous (RU Base & CU PAD, etc)

c. The supporting facilities were required for the installation of the fire control group equipment to support the Phase II Missile Firing Program scheduled for September 1976. The supporting facilities provided an operations control center for the installation of the PATRICT Fire Control Group. These facilities will be contractor-operated (Raytheon).

d. Contract number under which RDTE project was funded: DAAH01-72-0106.

MAJOR IMPROVEMENTS TO AND CONSTRUCTION OF GOVERNMENT-OWNED

FACILITIES FUNDED BY RDTE, ARMY APPROPRIATION

RDTE Project

Total Obligational Authority (Thousands of Dollars)

Facility/Equipment

Number

FY 76 FY TQ Location

SECTION II

Projects Planned or Projected

Negative

PART 2. UTILIZATION OF RDTE APPROPRIATION FOR FACILITIES/EQUIPMENT AT GOVERNMENT-OWNED/GOVERNMENT-OPERATED INSTALLATIONS

Chapter 251 (which was approved by the GAO as DOD Instruction 7220.5) provides that RDTE appropriations may finance the development, design, purchase and installation (including directly related foundations, shielding, environmental control, weather protection, structural adjustments, utilities and access) of equipment or instrumentation required for research, development, test, and evaluation activities. The table below provides a summary listing of all such projects for the installation of equipment, where the cost of installation is \$50,000 or more, accomplished in FY 1976, FY 1970, and planned in FY 1977 and FY 1977.

Project Number RDTE

Facility/Equipment

Location

Total Obligational Authority (Thousands of Dollars) FY 76 FY TQ FY 77

SECTION I

Projects Accomplished or Underway

Negative

MAJOR IMPROVEMENTS TO AND CONSTRUCTION OF GOVERNMENT-OWNED FACILITIES FUNDED BY RDIE, ARMY APPROPRIATION

Project (Thousands of Dollars)	RDTE Total Obligational Authority
	Project (Thousands of Dollars

SECTION II

Projects Planned or Projected

1. Projects Planned

MAJOR IMPROVEMENTS TO AND CONSTRUCTION OF GOVERNMENT-OWNED

FACILITIES FUNDED BY RDTE, ARMY APPROPRIATION

Facility/Equipment

Total Obligational Authority (Thousands of Dollars)

FY 77 FY 76 FY TO

Location

Project Number Supporting Narrative Statement on Projects of \$300,000 or More

a. Picatinny Arsenal, Design for Installation of Equipment

(1) Funds for Architectural Engineer (AE) Design Contract for installation of approximately 6,000 major items of equipment in 13 existing and two new buildings at Picatinny Arsenal, Dover, NJ.

No new major items of equipment or structures are requested under this project. All costs are non-severable costs.

architectural contract to alter or construct the buildings. The purpose of this action is to support the first phase of a three Edgewood Arsenals and to reorganize with it, certain equipment already installed at Picatinny Arsenal. Funding has already been Development Activities at Picatinny Arsenal. This project is for design for equipment moving from Frankford, Rock Island, and year program to form the US Army Armament Research and Development Command and to consolidate most Armament Research and The project is required to provide architectural design to install the cited equipment as a part of an overall accomplished and contract is underway under NY District Engineer Contract DAC-651-76-C-0168.

Project supports all ongoing, in-house Armament, small arms, large calibre and small calibre ammunition, fire control systems, technical diagnostic equipment, mechanical time-fuse optics and tech base physical science research and development projects. Contract number under which RDTE project was funded: Not applicable.

Statement of protection of interest of the United States: Not applicable. All facilities and equipment are government owned.

Ft. Belvoir, VA, Laser Laboratory þ.

government owned, laser laboratory equipment being moved from Ft. Mormouth, NJ and Adelphi, MD. Building 357 is a modern, permanent laboratory building of 48,000 square feet of which approximately 29,000 square feet will be devoted to laser laboratory purposes. Project also includes the cost of desinstallation, shipment and installation of this equipment and the secondary moves Alterations to existing laboratory and office space in Building 357, Ft. Belvoir, VA to accept installation of existing, required to rearrange other equipment already in the building. Building modifications require minor movement and rearrangement of partitions and doors; provision for new utilities hook-up for power, water and air; laboratory hoods and venting equipment; laser door interlocks; electrical screen rooms and added humidity control in one area. No new major items of equipment are included in the project.

MAJOR IMPROVEMENTS TO AND CONSTRUCTION OF GOVERNMENT-OWNED FACILITIES FUNDED BY RDIE, ARMY APPROPRIATION

Total Obligational Authority (Thousands of Dollars) FY 76 FY TO Location Project Facility/Equipment

Supporting Narrative Statement on Projects of \$300,000 or More (Continued)

- All costs are non-severable new major items of equipment or additions to structure are requested under this project. No. costs.
- research and development missions presently assigned to the Electronics Command at Ft. Monmouth, NJ and Harry Diamond Laboratories at Adelphi, MD. These missions are to be consolidated with similar functions already located at Ft. Belvoir and a part of a proposed reorganization which will achieve in excess of \$7,200,000 in annual savings. This project provides for installation of laboratory facilities for research, development, experimentation, technical data recording, experimental fabrication and testing for all types of laser devices to be used for distance ranging, fire control, target designation, target signature and similar The facility is required to provide the minimum, facilities necessary to house the proposed reorganization of laser laser applications. Funding is requested in FY 77 to allow completion of project prior to move proposed for late FY 78.
- (4) Contract number under which RDTE project was funded: Not applicable. Project supports all ongoing, in-house non-lethal laser technical base, research and developmental projects (except medical).
- Statement of protection of interest of the United States: Not applicable. All facilities and equipment are government

UTILIZATION OF RDTE APPROPRIATION FOR MINOR CONSTRUCTION PART 3.

For in-house installations, construction projects in support of R&D for \$75,000 or less are funded from RDTE appropriations. Such expenditures are authorized by 10 USC 2674 and the applicable provisions of the current DOD Appropriation Act. Under this commanders as appropriate. The table below provides a summary total of such minor construction accomplished in FY 1976 and FY 19TQ, and the estimated amounts planned for FY 1977 and FY 1978. procedure, project approval at this level is authorized by the Major Command concerned, or delegated to R&D installation SUMMARY OF MINOR CONSTRUCTION FUNDED BY RDIE, ARMY

FY 1978	2,200
FY 1977	2,000
FY 19TQ	505
FY 1976	2,620

Section 8

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY PROJECT DATA FOR CONSTRUCTION AT GOVERNMENT-OWNED FACILITIES FUNDED BY RDTE, ARMY APPROPRIATIONS

A DD Form 1391, Military Construction Project Data, will be included in this section for each budget year project for proposed construction, alteration, expansion or modernization of Government-owned facilities. A DD Form 1391 is not required to support the lump-sum estimate for minor construction included in Section 7. This estimate will continue to be a contingency estimate based on past experience as related to the budget year program.

ARMY ARMY ARMY A COPETAL A COMMAN A COPETAL A COMMAN A COPETAL A COMMAN A COM	Section 8 (Contd)									
### WILLIARY CONSTRUCTION PROJECT DATA #### WILLIARY CONSTRUCTION FROM CODE NUMBER #### WILLIARY CONSTRUCTION OF FROM CODE NUMBER #### WILLIARY CONSTRUCTION CODE NUMBER ### WILLIARY CODE N	1. DATE 2. FISC	AL YEAR			3 DEPARIMENT	4 145 ALL # 108				
SECTION A. DESCRIPTION OF PROJECT 19.0400 Numbers Paragram P.L.		9261	MILITARY CONSTR	UCTION PROJECT DATA	ARMY	White Sands Missile Ra	nge			
SECTION A DESCRIPTION OF SECURATION OF SECTION AS DEPARTMENT TO SECTION A DESCRIPTION OF SECTION AS DESCRIPTION OF SECTION OF SECTION AS DESCRIPTION OF SECTION AS DESCRIPTION OF SECTION OF SECTION AS DESCRIPTION OF SECTION AS	S. PROPOSED AUTHORIZAT	z o	6 PRIOR AUTHORIZATION	ø		9, STATE, COUNTRY				
Section A Description of Project Number Should be section and	\$ 447,700		P.L			New Mexico				
SECTION A. DESCRIPTION OF PROJECT The project will provide the facilities for PARIOT Project Office. The prime facilities will be provided through existing and hardware and the provide access way. The prime facilities will be provided through existing and hardware and the provide access way. The prime facilities will be provided through existing and hardware and the provide access way. The prime facilities will be provided through existing and hardware and the preparations control engineers. The prime facilities will house the A.C equipment, and the operations control of the facilities will house the A.C equipment, and the operations control of the prime facility is a frame structure of 1865 SF. This formation will house the A.C equipment, and the operations control of the prime facility is a frame structure of 1865 SF. This formation of an elevation of the fittee control engineers, and the operations control of the present erosions control of the fittee control engineers, and the operations control of the facilities are required to mental the stead of the program. The site work includes construction of an elevation of an ele	10. PROPOSED APPROPRIA	NOI	11 BUDGET ACCOU		UMBER	13. PROJECT TITLE				
SECTION A. DESCRIPTION OF PROJECT SECTION A. DESCRIPTION OF PROJECT DIAMAN FACULTY	\$ N/A			RSA-12	3-76	Supporting Facilities	for PATRIOT F	Fire Contr	ol Group	
No. 100 Park STORM CARRACTERSTICS OF PRIMARY FACULTY A POSTERIOR S NO SESSIONES FLUCKS THE SET OF THE SET OF SET		SEC	CRIPTION	PROJECT			OST ESTIMATES			
X CERTACLE STORES No of STORES No of STORES No of STORES X CERTACLE STORES No of STORES No of STORES Y CERTACLE STORES No of STORES Y OF STORES NO OF STORES X This project will provide the facilities required for the first provide the facilities required for the facilities will be provided through existing X This project will provide the facilities required for the face of the				STICS OF PRIMARY FACILITY		FACILITY	+			(8000)
A CESTAN CAPACITY CAN STATES VAILES A CONTROLL STATES CAN ST		0	07.4	IL		Support	+	•		10
This project will provide the facilities required for the installation of the FATRIOT the Control Group Equipment and Hardware at WSNR to support the Phase II Missile Firits — Site Improvements I.S. Every Control Group Equipment and Hardware at WSNR to support the Phase II Missile Firits — Site Equipment I.S. Every Equipment, the facilities will be provided through existing — Site Equipment I.S. Every Equipment, and the operations control control equipment is retaining wall will be constructed at the edge of the pepulation of an elevat constructed at the edge of the pepulation to prevent erosion — Resistor Requirement at WSYG. Section Control Co	NEVT X	e. DESIGN		1865	£	2011	_	-	-	- 1
This project will provide the facilities required for the standardare at WNSR to support the Phase II Missile Firing. This project will provide the facilities required for the standardare at WNSR to support the Phase II Missile Firing. Program. The facilities will be provided through existing. Program. The facility is a frame structure of 1665 SF. This control equipment, and the operations control to the fitte control equipment, and the operations control content in the work includes construction of an elevant content in the stee work includes construction of an elevant of the structure of 1665 SF. This constructed at the edge of the bogen to prevent erosion. Xed fill area with base and paving. A retaining wall will require facilities and paving. Xed fill area with base and paving. A retaining wall will require the structure of 1665 SF. This project that base and paving. A retaining wall will require the structure of 1665 SF. This project that base and paving. A retaining wall will require the structure of the program. This project that specificate the system development to work includes an integration of the system development to meet the stated of the program. The support of the system development to meet the stated of the program. The support of the system development to meet the stated of the program. The support of the system development to meet the stated of the support of the system development to meet the stated of the program. The support of the system development to meet the stated of the system development to meet the stated of the support of the system development to meet the stated of the system of the system of the support of the system of the stated of the system of the system of the system of the system of the support of the system of the syst		4. COOL IN		. 35 Ton cost 18888.6/			1			
A this project will provide the facilities required for the Table Deprovements Installation of the PARRIOT From Control Group Equipment and Hardware at WSNR to support the Phase II Missile First Program. The facilities will be provided through existing Contracts with Raytheon and the PARRIOT Project Office. The Prime facility is a frame structure of 1865 SF. This Contracts with Raytheon and the PARRIOT Project Office. The Sprimkler Contracts with Raytheon and the Operations control To the fire control equipment, and the Operations control To the fire control equipment, and the Operations control To the fire control equipment, and the Operations control To the fire control equipment, and the Operations control To the fire control equipment, and the Operations control To the fire Sprinkler To the fire control equipment, and the Operations control To the Forest Control To the Population will be seen determined to be an urge of the Population will be control conterfor the Installative control conterfor the Installation of the Population will be control conterfor the Installation To the Population of the System development at WSNR. To the Population of the System development at WSNR. To the Population of the System development at WSNR. To the Population of the System development at WSNR. To the Population of the System development at WSNR. To the Population of the System development at WSNR. To the Population of the System development at WSNR. To the Population of the System development at WSNR. To the Population of the System development at MSNR. To the System development the Binst at WSNR. AR 2115-24 & AR 411 project of To the Program	IS. TYPEOF WORK	19 DESCR	PTION OF WORK TO BE CONE URGENT ROTE	CONSTRUCTION	ď.		-		-	
installation of the PATRIOT Fire Control Group Equipment . Site & Equilities [15] and Hackware at WNSR to support the Phase II Missile Firits . Test Towers & Cable Trench [15] Program. The facilities will be provide existing existing a frame structure of 1865 SF. This . Data Acquisition Center [15] Outling will house the A/C equipment, provide access way . Comm. Sc Comm. Sc CIRMEST) Contracts with Raytheon and the PATRIOT Project Office. The prime facilities will be provide access way . Comm. Sc Comm. Sc CIRMEST) Contracts with Raytheon and the PATRIOT Project Office. The prime facilities will house the A/C equipment, provide an elevant . Comm. Sc CIRMEST) Contracts with Base and paving. A retaining wall will . REA & Instrumentation Design & Edg. Contracts of the Control of the Project Office in Support of the system development at WSR Comm. Sc CIRMEST) CONTROL OF A STRUCT Project Office in Support of the system development at WSR PATRIOT Project Office in Support of the system development at WSR PATRIOT Project Office in Support of the system development at WSR Control of School o	X	This pr	1	ne facilities required i	200	ING + ACILITIES		-	181	
and Hardware at WSNR to support the Phase II Missile Firite Califices (Adble Trench LS Program The facilities will be provided through existing a New Mexico Tax (Adble Trench LS Contracts with Raytheon and the PATRIOT Project Office. The prime facility is a frame structure of 1865 SF. This Canada & Comm & Contract LS Canada & Comm & Co	I	install	ation of the PATRIOT	Fire Control Group Equi	1		7	-	610	0
program. The facilities will be provided through existing tiest loss to death of the facilities will be provided through existing the facility is a frame structure of 1865 SF. The prime facility is a frame structure of 1865 SF. The prime facility is a frame structure of 1865 SF. The facility mill house the A.O equipment, provide access ways a Comm Sec (TEMPEST) The center. The site work includes construction of an elevat and will will house the will house the begin to prevent eroson. The constructed at the edge of the begin to prevent eroson. The constructed at the edge of the begin to prevent eroson. SECTION C. BASIS OF REQUIREMENT TOTAL PROJECT ESTINATES TOTAL PROJECT E	1	and Har	dware at WSMR to supp	oort the Phase II Missil	1 20	& Facilities Utilities	LS		80	5.
contracts with Raytheon and the PATRIOT Project Office. The prime facility is a frame structure of 1865 SF. This related Acquisition Center to the fire control equipment, provide access way a Comm & Comm		Program	. The facilities wi	11 be provided through e	,	lowers & Cable Irench	200	-	00	
The prime facility is a frame structure of 1865 SF. This "Data Acquisition Center to the fire control equipment, provide access ways "Comm. Sc Comm. Sc Corn. Sec (TEMPESI) To the fire control equipment, and the operations control "Contingency" To fire site work includes construction of an elevat "Contingency" To fire begin to prevent erosion at Fac & Instrumentation Design & Eng. Section 22 Total PROJECT ESTIMATE CONTINUED ON PAGE 20 SECTION C. BASISOR REQUIREMENT TOTAL PROJECT ESTIMATE TOTAL PROJEC		contrac	ts with Raytheon and	the PATRIOT Project Of	0	Mexico lax	1.0	+	10	2
Lotthe fire control equipment, provide access way refire Sprinkler to the fire control equipment, and the operations control To the fire control equipment, and the operations control Red fill area with base and paving. A retaining wall will De constructed at the edge of the beam to prevent erosion SETTION C. BASISOF REQUIREMENT SETTION C. BASISOF REQUIREMENT THE REQUIREMENT TOWN C. BASISOF REQUIREMENT SETTION C. BASISOF REQUIREMENT TOTAL PROJECT ESTIMATE TOTAL PROJECT EST		The pri	me facility is a fran	ne structure of 1865 SF.	18	Acquisition Center	120	-	1	0
center. The site work includes construction of an elevatory of the fire control equipment, and the operations control of an elevatory center. The site work includes construction of an elevatory center. The site work includes construction of an elevatory of the site work includes and paving. A retaining wall will be constructed at the edge of the beging to prevent erosion the factory of the project of the system development at WSMR. Section C. BASISOF REQUIREMENT SECTION C. BASISOF REQUIREMENT TOTAL PROJECT ESTIMATIBLE THE SHARIOT Project Office in support of the system development at WSMR. SECTION C. BASISOF REQUIREMENT TOTAL PROJECT ESTIMATIBLE TOTAL PROJECT ESTIMATIBLE SECTION C. BASISOF REQUIREMENT THE SHARIOT Project Office in support of the system development at WSMR. SECTION C. BASISOF REQUIREMENT TOTAL PROJECT ESTIMATIBLE TOTAL PROJEC	REFLACEMENT	buildin	g will house the A/C	equipment, provide acce	-	- 10	-	-	11.	5
Center. The site work includes construction of an elevat Contingency Act of the beam of paving. A retaining wall will Contingency and the edge of the beam to prevent erosion 2 total project of the State of Instrumentation Design & Engineer Court of Design & Engineer Court & Engineer & Engineer Court & Engineer	TYPE OF DESIGN	44	fire control equipmen	and the operations of	•	-			30	0
**Section of the beam to prevent erosion 12 TOTAL PROJECT CONTRICT OF TOTAL PROJECT ESTIMATED OF TOTAL PROJECT CONTRICT OF TOTAL PROJECT CONTRICT OF TOTAL PROJECT ESTIMATED OF TOTAL PROJECT CONTRICT OF TOTAL PROJECT CONTRICT OF TOTAL PROJECT CONTRICT OF TOTAL OF TOT		nonter.	,	ides construction of an	Ě	ase & CU Pad		-	5	1
TOTAL PROJECT ESTIMATE SECTION C. BASISOF REQUIREMENT TOTAL PROJECT ESTIMATE THE SQUIREMENT FOR PROJECTINS project has been determined to be an urge ST PATRICT Project Office in support of the system development at NSMR. TOTAL PROJECT ESTIMATE THE SUPPORT TOTAL PROJECT TOTAL THE SUPPORT TOTAL PROJECT TOTAL TOTAL PROJECT ESTIMATE TOTAL PROJECT ESTIMATE TOTAL PROJECT ESTIMATE THE SUPPORT TOTAL PROJECT TOTAL THE SUPPORT TOTAL PROJECT TOTAL TOTAL PROJECT ESTIMATE TOTAL P	×	. fill		vavine A retaining wal	-	ingency			705	7
TATILE DATA TO DIGE TO DESCRIPTION OF PAGE OF REQUIREMENT TOTAL PROJECT ESTIMATED SECTION C. BASSO F REQUIREMENT TOTAL PROJECT ESTIMATED STATES TO THE SUPPORT OF THIS PROJECT HAS been determined to be an urge ST. PATRIOT Project Office in support of the system development at WSWR. Experimently undergoing system development testing to meet the stated of the program. The support the Phase II Missile Firing Program schedule porting facilities will provide an operations control center for the instal Fire Control Group. This includes a building, electrical service, significant of the program schedule includes a building electrical service, significant of the program control center for the installant of the program schedule impact will occur, causing a slip in the first and increasing the program schedule impact will occur, causing a slip in the first and increasing the program schedule impact will occur, causing a slip in the first and increasing the program cost as a result of the inefficient use of This delay may increase the technical risks of the program. This show the Installation Master Plan at WSMR, AR 2115-24 & AR 44 the NR PL 91-190, the Installation Master Plan at WSMR, AR 2115-24 & AR 44 the NR PL 91-190.		2000	موكم مراب	of the berm to prevent e	-	& Instrumentation Design	& Eng	-	90	80
**SECTION C. BASS OF REQUIREMENT TOTAL PROJECT ESTIMATEL TOTAL PROJECT ESTIMATEL SF. ** ACTION PROJECT This project has been determined to be an urge SF. ** PATRIOT Project Office in support of the system development at WSMC. ** ACTION C. ** Country of the program. The supporting facilities are required for the instal protupe equipment, to support the Phase II Missile Firing Program schedule protupe accommodate the equipment. The support facilities are required to mee accommodate the equipment. The support facilities are required to mee accommodate the equipment. The support facilities are required to mee accommodate the equipment. The support facilities are required to mee accommodate the equipment. The support facilities are required to mee accommodate the equipment owned facilities. Radio frequency support facilities in the support facilities and increasing the program schedule impact will occur, causing a slip in the first and increasing the program cost as a result of the inefficient use of This delay may increase the technical risks of the program. This project the NDTE funded. Facilities will be contractor-operated (Raytheon).		2000	CONTAD	N PAGE 2)		O/ECT COST	-		\$ 316.	2
PATRIOT Project Office in support of the system development at WSW. 18 currently undergoing system development testing to meet the stated of the program. The supporting facilities are required for the instal group equipment, to support the Phase II Missile Firing Program schedule for Control Group. This includes a building, electrical service, six accommodate the equipment. The support facilities are required to mee Existing government owned facilities capable of meeting the specific meeting the specific meeting the specific meeting the support facilities and increasing the program schedule impact will occur, causing a slip in the first and increasing the program cost as a result of the inefficient use of This delay may increase the technical risks of the program. This project to ROTE funded. Facilities will be contractor-operated (Raytheon).				SECTION C - B	ASIS OF REQUIREMEN	T TOTAL PROJECT E.	STIMATED COST		\$ 447	7
group equipment, to support the Phase II Missile Firing Program schedule program. The supporting facilities are required for the install proteing facilities will provide an operations control enter for the install fire Control Group. This includes a building, electrical service, six accommodate the equipment. The support facilities are required to meet accommodate the equipment owned facilities and indored by existing government owned facilities capable of meeting the specific able of accommodate or aduptication of facilities. Radio frequency support facilities are required to meet able. This is not a duplication of facilities. Radio frequency support and increasing the program schedule impact will occur, causing a slip in the first and increasing the program cost as a result of the inefficient use of This delay may increase the technical risks of the program. This projuct to RDI-190, the Installation Master Plan at WSMR, AR 2115.24 & AR 4R the RIO RDID Funded. Facilities will be contractor-operated (Raytheon).		TATITAT		DATE TOT DESIGNATION OF FLORE	in support of	has been defermined to be	uswR The p	Squirement	eeile Su	E O T O
group equipment, to support the Phase II Missile Firing Program schedule group equipment, to support the Phase II Missile Firing Program schedule grouting facilities will provide an operations control center for the install accommodate the equipment. The support facilities are required to meet accommodate the equipment. The support facilities are required to meet in the state of the second of accommodate of meeting the specific range government owned facilities capable of meeting the specific range it reacting or leasing facilities is not possible. If the support facilities and increasing the program cost as a result of the inefficient use of This delay may increase the technical risks of the program. This sproject PL 91-190, the Installation Master Plan at WSMR, AR 2115-24 & AR 4R the Increase the Facilities will be contractor-operated (Raytheon).	(0)	1		is currently undersoir	s system develor	oment testing to meet the	stated requi	rements	nd objec	tives
group equipment, to support the Phase II Missile Firing Program scheduled for Sep 1976, porting facilities will provide an operations control center for the installation of the fire Control Group. This includes a building, electrical service, site work and drainage accommodate the equipment. The support facilities are required to meet PATRIOT Project Existing government owned facilities capable of meeting the specific requirements are not able. This inot a duplication of facilities. Radio frequency support is not requirements raccing or leasing facilities is not possible. If the support facilities are not provid eevere program schedule impact will occur, causing a slip in the firing of the Phase II m and increasing the program cost as a result of the inefficient use of manpower and hardwa This delay may increase the technical risks of the program. This project conforms to the fine RDTE funded, Facilities will be contractor-operated (Raytheon).	A. TOTAL RECOLDERED		7787	of the program. The	supporting facil.	ities are required for the	e installatio	on of the	fire cor	itrol
AUTION AUTIONIZED FUNDED ATION ROGRAM	G. EXISTING ADEQUATE		C	group equipment, to su	upport the Phase	II Missile Firing Program	m scheduled t	for Sep 19	176. The	-dns :
AUTHORIZED TUNDED ATION ADDRAM	A FUNDED VOT IN INVENT	780		porting facilities will	ll provide an op	erations control center f	or the instal	llation of	the PA	TRIOT
AUTHORIZATION AUTHORIZATION PROGRAM # - f - f)	e. ADEQUATE ASSETS (c + d	0		rire Control Group.	nis includes a	bullaing, electrical serv	ice, site wor	TR and dra	inage re	41-
0 R00 R44			0	accommodate the equipment	nent. Ine Suppor	r racilities are required to been indicated	read hy the p	ATPIOT P	ram sene	2000
0 - (- s)	A UNFUNDED PRIOR AUTHO	SRIZATION		Existing covernment of	med facilities	nanable of meeting the Sp.	ecific requir	rements ar	e not av	1911-
RELATED PROJECTS	4. INCLUDED IN FY	0.800.8	3.7	able. This is not a c	funlication of fa	acilities Radio frequen	ev support is	not redu	ired. (-uo
	A. DEFICIENCY (*	()			cilities is not		t facilities	are not p	rovided,	. 63
And increasing the program cost as a result of the inefficient use of manpower and hardware. This delay may increase the technical risks of the program. This project conforms to the intent of PL 90, the Installation Master Plan at WSMR, AR 2115-24 & AR 415-35 for Urgent Construction RDTE funded. Facilities will be contractor-operated (Raytheon).	24 RELATED PROJECTS			severe program schedu	le impact will of	ccur, causing a slip in t	he firing of	the Phase	II miss	siles
This delay may increase the technical risks of the program. This project conforms to the intent of PL 91-190, the Installation Master Plan at WSMR, AR 2115-24 & AR 415-35 for Urgent Construction RDIE funded. Facilities will be contractor-operated (Raytheon).				and increasing the pro	ogram cost as a	result of the inefficient	use of manpo	wer and h	ardware	
of PL 91-190, the Installation Master Plan at WSWR, AR 2115-24 & AR 415-35 for Urgent Construction RDIE funded. Facilities will be contractor-operated (Raytheon).				This delay may increas	se the technical	risks of the program. T.	his project c	conforms t	o the ir	tent
- 3				of PL 91-190, the Inst	tallation Master	Plan at WSMR, AR 2115-24	& AR 415-35	for Urger	it Consti	-ona
					milities will be	contractor-operated (Ray	theon).			

White Sands Missile Range 4. INSTALLATION 3. DEPARTMENT ARMY MILITARY CONSTRUCTION PROJECT DATA (Continued) 2 FISCAL YEAR 1976 18 May 1976

SSA-12-76 Supporting Facilities for PATRIOT Fire Control Group

Utilities to be constructed are primary and secondary electrical distribution and a 725 KVA electrical substation. Work consists of site preparation, foundation, and installation of two (2) forty foot test towers; a radar liquid cooling unit base, sound barrier and protective preparation, foundation, and installation of a Radar Unit (RU), cover; and cable trenches using preformed concrete units. In addition, work will be performed for the installation of a Radar Unit (RU), bigital Acquisition System (DAS) van, and RU maintenance shelters. This project is not within a known flood plain. DOD "U" factors will be met.

The closure of Frankford Arsenal and the establishment of the ADC will result in This project provides facilities to support research, development, experimentation, technical This particular item replaces existing Frankford Arsenal equipment to support fabrication of transfer the presently assigned armament mission from Frankford Arsenal to Picatinny Arsenal CE .NON mission and, where economies dictate, the consolidation of other transfers into one project data recording, experimental fabrication and testing associated with the current Frankford This item is urgently required to provide the minimum facilities immediately necessary to capability. The closure of Frankford Arsenal and the establishment of the ADG Will resure \$37,000,000 annual savings. This reorganization will streamline the armament development activities for all weapon systems and ammunition so critical to national defense. This large metal parts in Building 3150 as a part of the large caliber ammunitions prototyping QUANTITY UNIT COST XX SECTION B . COST ESTIMATES 2/0 Install Hydraulic Press Picatinny Arsenal * 3000 Ton Press [Unfunded] 1. Design (Unfunded) 15%. 121 TOTAL PROJECT COST SECTION C - BASIS OF REQUIREMENT * (acquisition cost) New Jersey Increment 4. INSTALLATION 21. SUPPORTING FACILITIES project complies with PL 91-190 and PL 90-480. · Installation PRIMARY FACILITY DEPARTMENT T. CATEGORY CODE NUMBER - PROGRAM ELEMENT 6.58.01.A Army MA Relocate 3000 Ton Press from Bethlehem Steel to Bldg. 1P865801MM2 COST (\$ NA 28. REQUIREMENT FOR PROJECT NA d. wioth MILITARY CONSTRUCTION PROJECT DATA PHYSICAL CHARACTERISTICS OF PRIMARY FACILITY CROSS AREA . NO OF BLDGS ! B NO OF STORIESNES LENGTH 5500 II. BUDGET ACCOUNT NUMBER SECTION A . DESCRIPTION OF PROJECT 19. DESCRIPTION OF WORK TO BE DONE FUNDED 3150, Picatinny Arsenal. PRIOR AUTHORIZATION . DESIGN CAPACITY RDTGE AUTHORIZED QUANTITATIVE DATA P.L. -CUM NA FIRCAL VEAR THOUSE A TOT OF CHURCH 1977 PROPOSEO APPROPRIATION PROPOSED AUTHORIZATION Section 8 (Contd) (p . 3) 813881 3140004 . CHACKATEGUE BUITENES TYPE OF CONSTRUCTION TOTAL REQUIREMENT STANGA POROCATE \$1.00 C#4 CD #40 FC . 1 TYPE OF DESIGN TYPE OF WORK SEVI-PERMANENT E DRAMING NO. November 197 REPLACEMENT יאכרחסנס יא נא OTHER (Secily) MEN PACILITY Relocation \$ 200,000 \$ 200,000 ------ALTERATION DATE

1.

3

Page No.

DD 104 1391

HILTARY CONSTRUCTION PROJECT DATA Array Stockstown Historian Histori	DATE A PIECAL					1	DEPARTMENT	. INSTALLATION			
10 10 10 10 10 10 10 10	_	7	MILITAR	T CONSTR	UCTION PROJECT	DATA	Army	Picatinny Arsenal			
11 12 12 13 14 15 15 15 15 15 15 15	PROPOSED AUTHORIZAT		RIOR AUTHORIZ	MOITA	7. CATEGORY CODEN	CKSER . PROCE		BIATE/COUNTRY			
1265801901 126	\$151,000		T.		6.58.01.A			New Jersey			
SECTION A. DESCRIPTION OF PROJECT 1965-8019901 Increment 1, ASSACRATION OF PROJECT		110M	11. •00	SET ACCOUNT		2. PROJECT NUMB		Install Video Cabling		1 2	3 0
SECTION A. DESCRIPTION OF PROJECT PARAMY FACUITY PA	\$151,000		658	21	1	P865801NM21		Increment 1, ARRADOOM		22	
THURST IN THE PAYMENT CHANGE CHANGE FRIMANY FACILITY THE COLOR OF THE CHANGE CHANGE FRIMANY FACILITY TO STATE CHANGE FROM THE CHANGE FROM TH		SECTIC		TION OF P	ROJECT				COST ESTIMATES		
Stations from Prank ford Arsens WA Station of the Column of the Colu	TYPE OF CONSTRUCTION	•	PHYSICAL CH	ARACTERIST	TICS OF PRIMARY FAC	פורודץ	NO PRIMARY	וסובוזיא		S CNIT COST	CCST (\$200)
Relocate Instrumentation Cabling for 14 Video Display in described Argental Cabling for 15 Video Display in described Argental Cabling Argenta	7	0 0 0 0 0	L	T STORIES	1		-	abling (unfunded)		-	
A continued with a continued to Pleatinny Arseral A continued A co	F	. DESIGN CAP		(a)	NEA W	A	b (acqui	sition cost))) (
Relocate Instrumentation Cabling for 14 Video Display Relocate Instrumentation Cabling For 14 Video Display Relocate Instrumentation Cabling For Provided Foreign Cabling For Provided Foreign Cabling For Provided Foreign Cabling For ign Cabling For Foreign Cabling For Foreign Cabling Foreign Cabling For Foreign Cabling Foreign Cablin		COOLING		CAB			٠ (1	
Stations from Prankford Arsenal to Pleatinny Arsenal Action Cabing for 14 Wileo Display Arsenal Action Cabing from Prankford Arsenal to Pleatinny Arsenal Action Cabing from Prankford Arsenal to Pleatinny Arsenal 15 Action Cabing Cabi	TYPE DE MORK	18. DESCAIPTI	ON OF WORK TO	3 NOO 38				N. W. S. D. S.		`	
SECTION C. BANS OF SECTION C. BA	NEW FACILITY	Relocate	Instrumen	tation C	abling for 14	Video Displ	7.7	G FACILITIES			•
SECTION C. BASS OF REQUIREMENT OUTCOMES OUTC	701100	STRITOUR	TION LIGHT	אוסות עו	פבוימד מס ודכשו	time we seeme	L				
SECTION C. BASS OF REQUIREMENT Land La	ACTENATION									1	
SECTION C. BASIS OF REQUIREMENT THIS Item is ungently required to provide the minimum facilities framediately recessed that where the presently assigned arranged to provide the minimum facilities framediately recessed that where the presently assigned arranged to provide the minimum facilities framediately recessed that where the presently assigned arranged to provide framediately recessed that where experimentalities for research, development, experimentation, technical factors and technical with the current framediately recessed that where the apports the Technical Data Facility, Bids 15 and provides for recessed that the framediately recessed that the framediately recessed that the framediately recessed to the ADS will result in 37 COS, COS annual systems and arranging and arranging the statement development activities for all weapons systems and arranging and provides for the ADS will result in 37 COS, COS annual systems and arranging and provides for the ADS will result to the ADS will resu	014 En (Specify)						6				
SECTION C. BASIS OF REQUIREMENT Than Stem is urgently required to provide the minimum facilities furnediately recessed to Practice of Transfer the presently assigned armament mission from Frankford Arsenal to Petalitry Are recording, experimental fabilities for reasonable view to Practical and Authorize and Authorize for the consolidation of other transfers into one professional and antimities for reasonable and antimities for reasonable and antimities and arrantices and arrantice and arrantice and arrantice of the ADC will result in \$37,000,000 annual savings. This recording and arrantices are an arranticed and arrantice and arrantice and arrantices are all and arrantices are all and arrantices are all and arrantices are all and arrantices are arrantices. This project complies with the intent of PL 91-190 and 518-190.	Felocation						•				
SECTION C. BASIS OF REQUIREMENT *** SECTION C. BASIS OF REQUIREMENT *** CONTRIBUTION OF THE STATE OF STATE OF THE STATE	REPLACEMENT						1.			`	
SECTION C. BASIS OF REQUIREMENT OUANTITY/PVE DATA THE STATE OF PROPERTY CONTRIBUTION TO SECTION C. BASIS OF REQUIREMENT OUANTITY/PVE DATA THE STATE OF PROPERTY OF THE MESSAGE OF THE	TYPE OF DESIGN						•)	
SECTION C. BASIS OF REQUIREMENT COLAR PARA COLAR PARA This item is unger This item is under This item is unger This item is unger This item is under it	STANDARD DE M GN						÷.				
SECTION C. BASIS OF REQUIREMENT This stem is ungently required to provide the minimum facilities immediately recessed transfer the presently assigned armanent mission from Frankford Arsenal to Picalitry Armanent () This project provides facilities for research, development, experimentation, technical recording, experimental fabrication and technic associated with the current Frankford Arsenal in and, where economics distate, the Percential Data Facility, Bldr 15 and provides for recording accessing of design data by engineering personnel. The closure of Frankford Arsenal at a streamline the armanent development activities for all weapons systems and armanification entitied to national defense. This project complies with the intent of PL 91-195 and 51391	SPECIAL DESIGN Y						γ,)	
CONTINION ONLY NOT SECTION C. BASIS OF REQUIREMENT OUNTINION OF THE STATE OF THE S	DRAMME NO.						/ Design	(Unfunded) 15%			. 22
This item is ungently required to provide the minimum facilities immediately recessed to the contraction transfer the presently assigned armament mission from Frankford Arsenal to Pications it transfer the provides for research, development, experimentation, technical recording, experimental fabrication and testing associated with the current Frankford recording, where economics dictate, the consolidation of other transfers into one profest. This protection of other transfers into one profest. This protection of other transfers into one profest. This protection is 37,000,000 amound sayings. This recording accessing of design data by engineering profest of the ADC will result in 37,000,000 amound sayings. This recording attained armament development activities for all weapons systems and arranificon so critical to national defense. This project complies with the intent of PL 91-195 and TL activities for all weapons and arranificon so critical to national defense. This project complies with the intent of PL 91-195 and TL activities for all weapons are arranifical to national defense and arranificant arranifi					35	CTION C - BASIS	OF REQUIREMENT	JECT COST		1	-
transfer the presently assigned armament mission from Frankford Arsenal to Picatinny Ara recording, experimental fabrication and desting experimentation, technical and, where economics distate the reconnect for and statement of the recording, experimental fabrication and testing and, where economics distate the Technical Data Facility, Bldr 15 and provides for recording accessing of design data by engineering personnel. The closure of Frankford Arsenal and structular streamline the armament development activities for all weapons systems and arranition so eritical to national defense. This project complies with the intent of FL 91-195 and 52		NATITATIVE O	DATA		This ite	m is urgent	y required to	provide the minimum fac	ullities immediat	tely rece	CESTY
This project provides facilities for research, development, experimentation, tecrnion, and, where conomics distates the new facility and testing associated with the current Francisch and, where economics distate, the conomics of other transfers into one project. This project complies with the current Francisch accessing of design data by engineering personnel. The closure of Frankford Arestal and according accessing of design data by engineering personnel. The closure of Frankford Arestal and according accessing of the ADC will result in 877,000,000 annual savings. This recognization so streamline the armament development activities for all weapons systems and according and engineering activities to national defense. This project complies with the intent of PL 91-190 and FL 9	TOTAL REQUIREMENT				transfer the	presently a	ssigned armame	nt mission from Frankfo	ord Arsenal to P	deating	4:10:12
recording, experimental labracation and resulng associated with the outrent Francisco. and, where economics affects the consolidation of other transfers into one project. The performance of accessing of design data by engineering personnel. The closure of Francion Arsenal and arrows streamline the armament development activities for all weapons systems and arrunition so eritical to national defense. This project complies with the intent of FL 91-195 and 57.	CRISTING SUBSTANDARD		_		This project	provides la	cilities for r	esearch, development,	experimentation,	technica	et :
Authomize the confidence alorate, the constitution of the provides for rotation accessing of dealing data by engineering personnel. The closure of Francford Arsensiani across streamline the armament development activities for all weapons systems and armamisticn so critical to national defense. This project complies with the intent of PL 91-190 and TA 78	EXISTING ADEQUATE				recording, ex	(perimental	aprication an	d testing associated w	th the current	real cor	100
particular item supports the lecunical has a fact in the particular item supports the lecunical has a fact in the closure of Francisch Arseni at a case state and are all as a particular process. This reorganization streamline the armament development activities for all weapons systems and armamilion so critical to national defense. This project complies with the intent of PL 91-195 and TL 7891	FUNDED HOT IN INVEN	10 81			and, where ec	conomics die	cate, une cons	pridation o. Singi	naters into one	pro de la	7
And a stream of the armament of the ADC will result in 837,0500 annual savings. This reorrantsation is streamline the armament development activities for all weapons systems and arranticles some critical to national defense. This project complies with the intent of PL 91-190 and FL 9391	ADEQUATE ASSETS (C	9			particular it	saloddns mar	the reconical	Data Facility, Blue 1	and provides a	2000	
streamline the armament development activities for all weapons systems and arrantition so critical to national defense. This project complies with the intent of PL 91-190 and TL 78			AUTHORIZED	FUNDED	accessing of	design data	oy engineerin	tersonner. The closu.	TO OF FEBRUARY OF THE	M. Carrier	
streamline the armanent development activities for all weapons systems and animalistic of the strent of PL 91-195 and TL 1391	UN PUNDED PRIOR AUTH				establishment	of the ADC	will result i	n 837,000,000 annual s	avings. Inis re	OF THE 28.	
reservence of the string of th	יאכרחסבט יא בי	PROGRAM			streamline th	e armament	development ac	tivities for all weapon	ns systems and a	JOS I LEGE	2
1391	-1 1 -	9			critical to r	national def	ense. This pro	lect complies with the	intent of PL 31	-190 end	- 2
1391											
1391											
1391											
	JD 704- 1391					78				PAGE NO.	

152.50 1977	3. DEPARTMENT 4. INSTALLATION	701
THORIZATION PL. III BUDGET ACCOUNTY P.L. G.S.O. III BUDGET ACCOUNTY P.L. G.S.O. ARMY	nny Arsenal	
P.L. SECTION A. DESCRIPTION OF PR NUCTION X MO OF BLOSS 1 NO OF STORIES N TO STORIES N SECTION A. DESCRIPTION OF PR PHYSICAL CHARACTERIST CASCIOLINE NAT SOCIETA NO OF BLOSS 1 NO OF STORIES N TO STORIES NO OF STORIES N TO STORIES NO OF STORIES N TO STORI	TO CATEGORY CODE NUMBER & PROGRAM ELEVENT	. KEL € D
SECTION A DESCRIPTION OF PR AUCTION A	5500 6.58.01.A	rsey
AUTON SECTION A DESCRIPTION OF PR NUCTION SECTION A DESCRIPTION OF PR PHYSICAL CHARACTERIST OCCURS NA Relocate test chamber f Relocate test chamber f Arsenal to bidg. 3100, Arsenal to bidg. 3100, Arsenal to bidg. 3100, Sector of the control of the cont	12 PROJECT NUMBER	Tite Chamber
NUCTION IN PRESCRIPTION OF PRESCRIPTION OF PRESCRIPTION OF PRESCRIPTION OF PRESCRIPTION OF WORKERST A CONCERNIST RESCRIPTION OF WORK TO RE GONE RESCRIPTION OF WORK TO RE GONE RESCRIPTION OF WORK TO RE GONE RESCRIPTION OF WORK TO RECOME THE SECOND OUTSITE AND THE SECOND OUTSITE OF THE SECOND OUTSITE OUTS	1 1P865801MM21	
NUCTION X - NO OF SLOAT PHYSICAL CHARACTERIST X - NO OF SLOAT PHO OF STORICEN A COOLING NA 10 - OSSIGN CAPACITY RDTGE ACCOUNT NA	DESCRIPTION OF PROJECT	SECTION B - COST ESTIMATES
Arsenal to bidg. 3100, Secure NA Cocuse NA Cocuse NA Cocuse NA Relocate test chamber f Relocate test chamber f Arsenal to bidg. 3100, NAT SEGN COMMITTATIVE DATA COMMITTATIVE	20 SICAL CHARACTERISTICS OF PRIMARY FACILITY	U/M QUANTITY UNIT COST COST (400)
Arsenal to bidg. 3100, Secure NA Relocate test chamber f Relocate test chamber f Arsenal to bidg. 3100, NAT NAT NAT NAT NAT NAT NAT NA	B NO OF STORIES NA LENGTH NA G MIDTH NA	r (UNFUNDED) (150
Relocate test chamber for second and the second and	RDTGE ' GROSS AREA NA	cost) (()
Relocate test chamber f Relocate test chamber f Arsenal to bidg. 3100, Arsenal to bidg. 3100, BEN X OMANTITATIVE DATA OMANTITATIVE	CAP NA COST (\$ NA) C.	
Relocate test chamber for the state of the s	WORK TO BE DONE	
Arsenal to bidg. 3100, Political State	from Frankford	
PENT SEGON CONTITATIVE DATA (UM N/A N/A) AUTHORIZED FUNDED (UM N/A) AUTHORIZED FUNDED (CONTITATIVE DATA) AUTHORIZED FUNDED (CONTITATION AUTHORIZED FUNDE	. Picatinny Arsenal Relocate	st Chamber (152.5
OD SESSON CENT CENT CENT COMMITTATIVE DATA CUM N/A STANDARD COMMITTATIVE DATA CUM N/A STANDARD COMMITTATIVE DATA COMMITTATIVE COMMITTATIVE DATA COMMITTATIVE DATA COMMITTATIVE DATA COMMITTATIVE DATA COMMITTATIVE DATA COMMITTATIVE DATA COMMITTATIVE COMMITTATIVE DATA COMMITTATIVE DATA COMMITTATIVE DATA COMMITTATIVE DATA COMMITTATIVE DATA COMMITTATIVE DATA COMMITTATIVE	9	
CENT CONSTITUTIVE DATA CONSTITUTIVE CONSTIT	C.	
COMMITTATIVE DATA COUNTY NAME		
CONTRACTOR NATIONAL N		
OUANTITATIVE DATA OUANTITATIVE	T.	
OUANTITATIVE DATA AUTHORIZATION THE INVENTORIZATION THE INVENTORIZATION THE INVENTORIZATION AUTHORIZATION AUTHORIZATION AUTHORIZATION AUTHORIZATION AUTHORIZATION AUTHORIZATION AUTHORIZATION AUTHORIZATION	The state of the s	
COLAMITATIVE DATA CUM NAA) STANDARD COUNTY THINVENTOR AUTHORIZATION TO SOUTH OF THINCE OF	The state of the s	
OUANTITATIVE DATA OUANTITATIVE DATA OUANTITATIVE DATA SOLUTION OF THE CONTROL		
ONANTITATIVE DATA TO (MM N/A)	/ Design (unfur	unded) 15%
OUANTITATIVE DATA THOM	SECTION C - BASIS OF REQUIREMENT	7.54
no () () () () () () () () () (29. 9 60	ly required to provide the minimum fact
HATORY THORIZED FUNDED ANTHORIZED FUNDED ROCKALA - D	ties immediately necessary to transfer	the presently assigned armament miss
AUTHORIZED FUNDED FORMAL AND	for research development carcing Arse	senal. This project provides faciliti
AUTHORITED FUNDED	mental fabrication & testing associated	a with the current Frankford mission
A1004	where economies dictate, the consolidati	tion of other transfers into one pro-
AUTHORIZED FUNDED	This particular item provides for instance	of a cime larged value and our contact in the
AUTHORIZED FUHCED	Support of environmental facting of systems and	d components. The closure of Frankford
PAGE NA	MIZED FUNDED	ween't in \$37,000,000 annual cavings. This
	reorganization will streamline the armament devi	welcoment activities for all weapons systems
PL 91-190 and PL 90-480.	and amminition of critical to notional defense	This project complies with the intent of
	nt of too and on the contract to martonal determine.	
	1 21-130 and FL 30-400.	
DD FORM 1391	79	PAGE VO.

(Contd)	
00	
tion	
Sec	

		And the Control of th	AND SECTION SERVICES AND SECTION OF THE SECTION OF	STATE OF THE PARTY					Ī
0476	S. PIBCAL VEAR			S. DEPATORNI	+ Malacra los				
3761 vov	1979	MILITARY CONST	ILITARY CONSTRUCTION PROJECT DATA	Army	Picatinny Arsenal				
	MOITAS	S PRIOR AUTHORIZATION	2. CATEGORY CODE NUMBER 8. PROCRAM ELEMENT	PROGRAM ELEMENT	P. STATE/COUNTRY				
\$ 80,000		P.L.	5500	6.58.01.A	New Jersey				
10 BROPOSEO APPROPRIATION	- NIA TION	11. BUDGET ACCOUNT NUMBER		12. PROJECT NUMBER	The PROJECT TITLE		2	20	3 0
\$ 80,000		1005001	IP86580111721	LIME	Install 101810H meter Increment 2, ARRADCOM		Σ,		
	SEC	SECTION A DESCRIPTION OF PROJECT	PROJECT		SECTION B - COST ESTIMATES	ST ESTIMATE	5		
TYPE OF CONSTRUCTION	· ·	PHYSICAL CHARACTER!	PHYSICAL CHARACTERISTICS OF PRIMARY FACILITY	20 PHIMARY FACILITY	F. A.C. L. (T.Y.	2	QUANTITY UNIT COST	0	582.47.56
	X . NO OF BLOGS	BLOGS] I B NO OF STORIEST A LENGTH N/A		d morn N/A . Torci	· Torsionometer (Unfunded)	-	-	(0.	5
D SEVI-PERMANENT	. DESIGN CAPACITY	1	N/		* (Acquisition Cost)	J	(-	
C. TEMPORARY	COOLING	N/A	N/A cost (\$	N/A) c		_		,	
13 TYPE OF WORK	19. DESCR	19. DESCRIPTION OF WORK TO BE DONE		ד		j.		,	-
S NEW FACILITY	Reloca	ite Torsionometer fro	Relocate Torsionometer from Rock Island Arsenal to		21. SUPPORTING FACILITIES				
* * 000 TION	Bldg 3	Bldg 351, Picatinny Arsenal.	r.	· Inst	• Installation			,	1
C ALTERATION				٥					-
4 CONVERSION				2					
. OTHER (SPecify)				•				,	
Selecation				•				-	
14. REPLACEMENT	П			,		-		-	
17. TYPE OF DESIGN	П			•					
. STANDARD DEBGN	7			ě			-		
P. SPECIAL DESIGN	X			1,					
C. DRAMME NO.				/ Design	" Design (Unfunded) 15%	-		(12.	
				33. TOTAL PI	22 TOTAL PROJECT COST			1	0
			SECTION C	SECTION C - BASIS OF REQUIREMENT					
**	QUANTITATIVE DATA	VEDATA	25. REQUIREMENT TOR PRO-	"cr This item is un	The Recomment For Provide the Minimum is unrently required to provide the minimum facility	e the min	imum facil	12 23	-0.00

Arsenal. This provides the minimum facilities massed arranged to provide the minimum facilities massed arranged to transfer the presently assigned announced for from Rock Inland Arsenal. This project provides facilities for research, development, experimentation, installed associated with the current fact island mission and where economies dictate, the consolidation of other transfers into the project. This particular item provides for installation of torsion and ductility testing capabilities as part of the small and large caliber ammunition, prototyping capability and will be located in Blds. 351 Mechanics Laboratory. The transfer of function and the establishment of the ADC will result in \$37,000,000 annual savings. This reorganization will estimate the armament development activities for all weapons systems and ammunition so critical to national defense. This project complies with the intent of PL 91-190 and FUNDED AUTHORIZED PROGRAM UNFUNDED PRIOR AUTHORIZATION N/A EXISTING SUBSTANDAND

EXISTING SUBSTANDAND

EXISTING ADEQUATE

GRUSSES HOT IN INVENTORY (. .) #13881 3. TOE3QF . מבניכופאכז יא נג MELATED PROJECTS

44343

DD 104-1391

80

Page No.

Dec 1976 1977 MILTAR CONSTRUCTION PROJECT DATA ARWY Aberdeen Proving Ground Aberdeen		בי בופרער ובעע			3. DEPARTMENT	TMENT 4. INSTALL ATION		
ORIZATION SECTION A. DESCRIPTION OF PR SECTION OF PR CAP SECTION A. DESCRIPTION OF PR SECTION A. DESCRIPTION OF PR SECTION OF PR CAP SECTION OF PR CAP SECTION A. DESCRIPTION OF PR CAP SECTION A. DESCRIPTION OF PR CAP SECTION OF PR CAP SECTION OF PR CAP SECTION OF PR CAP SECTION OF PR CAP CAP CAP SECTION OF PR CAP CAP SECTION OF PR CAP CAP CAP SECTION OF PR CAP CAP CAP CAP CAP CAP CAP C	Dec 1976	1977	MILITARY CONST	RUCTION PROJECT DA				
SECTION A. DESCRIPTION OF PR SECTION A. DESCRIPTION OF PR T SECTION A. DESCRIPTION OF STORE NA. T SECTION A. DESCRIPTION OF STORE NA. T SECTION A. DESCRIPTION OF STORE NA. TARE TO COLING TO CAP TO C	S. PROPOSED AUTHOR		PRIOR AUTHORIZATION	7 CATEGORY CODE NUME	BER 8 PROGRAM ELEM			
SECTION A DESCRIPTION OF PRESCRIPTION OF STORIEGES AND SECOND STORIEGES AND SECOND SECON	\$ 210,000		P.L	310-34	6.58.01.A			
SECTION A. DESCRIPTION OF PR TABLE TO STORY OF	10. PROPOSED APPRO	RIATION	11 BUDGET ACCOL	2	ROJECT NUMBER	Equipment in Place for Compu	ıter	
CTION 18. PHYSICAL CHARACTERIST * DESIGN CAPACITY NA CAP * DESIGN CAPACITY NA CAP * OCCUPACITY NA CAP * OCCUPACITY NA CAP * OCCUPACITY NA CAP * OCCUPACITY NA CAP * SYSTEMS. * SYSTEMS. * OUNTITATIVE DATA * OUNTITATIVE	1	1000	100000	-	1 5000001111121	racilly basement, blug 320	THATES	
CTION TO THE STORY OF		אברו אברו	ON A DESCRIPTION OF	PROJECT	13		1	1
X * NO. OF SLOGS NA B. NO OF STORIENA CAP CAPACITY 2 COOLING 4 COOLING 19 DESCRIPTION OF WORK TO SECONE 19 DESCRIPTION OF WORK TO SECONE 2 SYSTEMS. X SYSTEMS. CUANTITATIVE DATA CUANTITATIVE DATA CUANTITATIVE DATA TSC: 03 AUTHORIZATION R AUTHORIZATION	TYPE OF CONSTRUCT	NO.	PHYSICAL CHARACTER!	STICS OF PRIMARY FACILITY		9	T	\$ 210.0
A COOLING NA CAPACITY NA CAPAC	PERMANENT			N.	NA		1	
A COOLING NA CAPERATON OF WORK TO BE CONE STATE ACCOMPANYING AIR CONDITIONING TO THE STATE ACCOMPANYING AIR CONDITIONING AIR CONTACTOR OF THE STATE AND THE	D. SEMI-PERMANENT			9.E.A		72	-	,
Site preparation for install accompanying air conditionin accompanying air conditionin X systems. CUANTIATIVE DATA CUM NA	C. TEMPORARY	8. COOLING	¥	NA cos :	Æ	C.	-	,
Site preparation for install accompanying air conditioning a systems. Systems. QUANTITIVE DATA QUANTITIVE DATA QUANTITIVE DATA QUANTITIVE DATA (1. // NA AND AD AND AD IS (c+d) AUTHORIZATION AUTHORIZATION SECTS.		19 DESCRIP	TION OF WORK TO BE DONE			d.		v
Systems. Systems. Quantitative Data Quantitative	S. NEW PACILITY	Site pre	eparation for insta	illation of new con		SUPPORTING FACILITIES		8
QUANTITATIVE DATA QUANTITATIVE	6. ADD 100	accomban	ny ing all condition	ing and life proce	1			-
CUANTITATIVE DATA CUANTITATIVE	C. AL TERATION	_				á		1
CUANTITATIVE DATA CUM NATURAL DATA CUM NATURAL DATA CUM NATURAL DATA CONTITUTE DATA CONTI	d CONVERSION					· ·		-
CUANTITATIVE DATA CUM NATURAL SATE CUM NATURAL SATE INVENTOR: ZATION RAUTHOR: ZATION	e. OTHER Specify)				1	P		-
CUANTITATIVE DATA ANDRE COUNTITATIVE DATA AUTHORIZED COUNTITATIVE DATA AUTHORIZED COUNTITATIVE DATA AUTHORIZED COUNTITATIVE DATA AUTHORIZED COUNTITATIVE DATA COUNTITATIVE DAT		1				· ·		
CUANTITATIVE DATA CUM NAT CUM NAT CUM NAT CUM NAT CUM NAT COMMITTED CO		Γ			L	•		
CUANTITATIVE DATA CUM NA CUM	A STANDARD DESIGN					ъ.		-
CUANTITATIVE DATA (U.M. NA.) FISTING SUBSTANDARD EXISTING ADEQUATE FUNDED, NOT IN INVENTORY ADEQUATE ASSETS (C.4.d) AUTHORIZED INCLUDED IN FY PROGRAM PROGRAM RELATED PROJECTS	S. SPECIAL DESIGN	X				1,		
COUNTITATIVE DATA (U.M. NA.)	ON DAMES OF S				72			\$ 210.0
CUANTITATIVE DATA (U.M. NA.) EXISTING SUBSTANDARD EXISTING ADEQUATE FUNDED, NOT IN INVENTORY ADEQUATE ASSETS (c. 4) NACUUED IN FY PROGRAM PROGRAM RELUED OF RICH AND				SECTION	ON C . BASIS OF REQU		led	210.0
NA THORIZED FUNDED ROCRAM	23	CUANTITATIVE	DATA	25. REQUIREMENT FO	PROJECT TO pro	ovide a suitable site, in a basement w	ring of the US Arm	y Ballisti
ATION AUTHORIZED FUNDED ROGRAM			(Research Laborat	cories, for a ne	ew computer. New computer used for so	ientific and engi	neering
AUTHORIZED FUNDED ATION ROGRAM	S. TOTAL REQUIREMEN	1.1		computations in	support of ball	listics technology research and ballis	stics vulnerabilit	у,
AUTHORIZED FUNDED ATION ROGRAM	6. EXISTING SUBSTAND	ARD	J	, vulnerability re	eduction, human	engineering and system analysis. Sit	e preparation and	equipment
AUTHORIZED FUNDED	C. EXISTING ADEQUAT			is a necessary	oreliminary step	o to installation of the new computer	which is tentativ	ely
AUTHORIZED FUNDED day. If this project is not approved, acquisition of the computer would be delay present and predicted workload of the SBL computers cannot be handled by present other existing facilities, this would only aggravate an already acute situation. meets the requirements prescribed in AR 415-35.	& FUNDED, NOT IN IN	ENTORY		scheduled for de	elivery in the 4	th quarter of FY 77. At present, the	computational re-	quirements
AUTHORIZED FUNDED day. If this project is not approved, acquisition of the computer would be delay. Present and predicted workload of the BRL computers cannot be handled by present other existing facilities, this would only aggravate an already acute situation. meets the requirements prescribed in AR 415-35.	e. ADEQUATE ASSETS	6+0		of the above lat	oratories are b	being met by two obsolete batch proces	sors operating 24	hours a
Present and predicted workload of the BRL computers cannot be handled by present of the restitude facilities, this would only aggravate an already acute situation. meets the requirements prescribed in AR 415-35.			2ED	day. If this pr	oject is not ap	oproved, acquisition of the computer w	rould be delayed.	Since the
oncome. other existing facilities, this would only aggravate an already acute situation. meets the requirements prescribed in AR 415-35.	A UNFUNDED PRIOR A	UTHORIZATION		present and pred	licted workload	of the BRL computers cannot be handle	ed by present equi	pment or
	4. INCLUDED IN FT	PROGRAM		other existing i	facilities, this	s would only aggravate an already acut		This project
24 RELATED PROJECTS	A. DEFICIENCY (.1-0		meets the requir	rements prescrib	sed in AR 415-35.		
	24 RELATED PROJE	CT \$						
				Т				
The control of the co	-			T				

81

DAGE NO

The second section of the second seco					C. 1 CO	28.00 18				70	139			37		and development	and Harry Diamond .	f the Army's imple-	ns already located	ecessary to establish	0	tion, technical data	devices to be utilized	rievement of the	ties and will un-	laser systems. This 90-48.		Pr. 35 114	
4. HISTALATION FORT Belvoir	Virginia	יין טארי טפר אוברט	Install Laser Laboratory (ERADCOM)	320 MILES 100 - 8 - 101 036	באסודונגע	Partitions LF 650		Heilities Hook - ups/mods.	Sooms, and	Install Foutbment and	Secondary moves			1:00:17 00:17		This project is urgently required to provide the minimum laboratory	facilities necessary at Fort Belvoir to house the reviganter asset research and Harry Diam	missions presently assigned to the tree course of the Army's imple-	Leadure. Street of the ANARC study and consolidated with similar functional missions already located mentation of the ANARC study and consolidated with similar functional missions already located	first phase of a three year program necessary to establish	the new US Army Electronics Research and Development Command at a number of locations.	Feorganization will assure as a marked of the second of th	recording, experimental fabrication and testing for various type of laser devices to be utilized	for distance ranging, fire control, target designation, target signature, and similar appro-	idation of personnel and support facilities and will un-	favorably effect the coordinated development of urgently needed battlefield laser systems	•	S. UNDERHILL, Colonel, GS	Director of Facilities and Equipment, EKADLUM
LITURY CONSTRUCTION 2801ECT DATA ARMY	GENERATION 17 CATEGORY CODE NOVINGED STATES TEXASON TEXASON TO STATE TO	12. 22.22.2 TO 20.22.2	685801 ERADCOM T-1	DESCRIPTION OF PRODUCT	ABVIOLE OF STREET	DI 120	F CCONS ATICA	Minor movement and rearrangement of existing flexible international and another ferbisch hook-ups from existing [Hill]		r door interlocks, electrical screen rooms by That		equipment from Fort Monmouth and Adelphi. Move and		1.17101 (1)	SECTION C - BASIS OF KLUITE	to negotiffeet on order This project	facilities necessary at Fort Belvoir	missions presently assigned to the transfer of	mentation of the AMARC study and cons	at Fort Belvoir. It is a part of the first	CASHER		recording, experimental fabrication a	for distance ranging, fire control, t	Hons. It this project is not approved in the Hollar savings by delaying the consolidation of	gavorably effect the coordinated deve	project has been reviewed and compile	82 VICTOR	מונפרוס
Section 8 (Contd)		371,000		STATES AND SECTION OF SECTION AND DESCRIPTION OF SECTION OF SECTION AND DESCRIPTION OF SECTION OF SEC	11	7 X X		Ninor movement a	building utiliti	Provide for	Equipment Instal- and added humid	1.1	X	0,1		CASTATIVE DATA	(, , , ,)	יי בפניי ופייניים בייים	3.000	*** 31. 40. 4 . 40. 40. 40. 40. 40. 40. 40. 40			******** *** COUNTY **	2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	8 ,				

lopment missions presently assigned to the Electronics Command at Fort Monmouth, NJ and the US Army Security Agency at Arlington Hall Station, VA. These missions are being transferred as a part of the Army's implementation of the AMARC study and consolidated with similar functional missions already located at Vint Hills. It is a part of the first phase of a three year, program necessary to establish the new US Army Electronics Research and Development Command at development of urgently needed tactical and strategic systems. This project has been reviewed and complies with the intent of PL 91-190 and PL 190-48. is. scouncient for project This project is urgently required to provide the minimum laboratory facilities necessary at Vint Hills to house the reorganized Signals Warfare research and deveconsolidation of personnel and support facilities and will unfavorably effect the coordinated ment, experimentation, technical data recording, experimental fabrication and testing for various types of signal warfare and intelligence electronic devices. If this project is not approved in this program it will delay the achievement of the dollar savings by delaying the savings. This project provides installation of laboratory facilities for research, developa number of locations. This reorganization will achieve in excess of \$7,200,000 annual JAIT COST CUANTITY SECTION B - COST ESTIMATES Install Signals Warfare Research 1/0 Vint Hills Farm Station Development Facilities . Equipment installation STATE COUNT Virginia and movement 21. SUPPORTING FACILITIES SECTION C. BASIS OF REQUIREMENT PRIMARY FACILITY DEPARTMENT CATEGORY CODE NUMBER NUMBER Army ERADCOM T-7 2. PROJECT NUMBER Installation of electronic laboratory equipment from Fort Monmouth, movement and reinstallation of USASA d niota MILITARY CONSTRUCTION PROJECT DATA PHYSICAL CHARACTERISTICS OF PRIMARY FACILITY GROSS AREA 74.000 . NO OF BLOGS | D. NO OF STORIES C. LENGTH II. BUDGET ACCOUNT NUMBER equipment and rearrange building. SECTION A . DESCRIPTION OF PROJECT FUNDED 15. DESCRIPTION OF WORK TO BE DONE 685801 PROR AUTHORIZATION AUTHORIZED QUANTITATIVE DATA P.L UNFUNDED PRIOR AUTHORIZATION FIRCAL YEAR FLADED, NOT IN INVENTORY 1977 PROPOSEO APPROPRIATION PROPOSED AUTHORIZATION שנהנסנס יא בא ERISTING SUBSTANCARO SQUATE ASSETS (6 . 4) Section 8 (Contd) quipment Install TYPE OF CONSTRUCTION TOTAL REQUIREMENT EX STING ADECUATE # E. . TED PROJECT! PE OF DESIGN STANDAKD OUNGE NACT TO BEY SEPLACEUENT SPECIAL DESIGN 127,000 127,000 *E+ FAC.LITY TERATION T.3.4.03. Nov 76

Director of Facilities and Leutiment, Elan Com

This reorganization will achieve in excess of \$7,200,000 annual savings. This project compliment, ERADCOM projects T-1 and T-7 (same budget submission) by providing the Fort Joncouth portion of the funding. If this project is not approved in this program it will delay the achievement of the dollar savings by delaying the consolidation of personnel and support facilities and will unfavorably effect the coordinated development of urgently needed tactical and strategic systems. This project has been reviewed and complies with the intent of PL 91-190 and PL 190-48. SECTION C. BASIS OF REQUIREMENT

11. TOTAL PROJECT CGST

12. TOTAL PROJECT CGST

13. TOTAL PROJECT THIS DEGLET IS UTGENTLY REQUIED to deinstall, pack and Ship the Electronical Laboratory equipment necessary at Vint Hills and Fort Belvoir to house the reorganized Signals Warfare and Laser research and development missions presently assigned to the Electronics Command at Fort Monmouth, NJ and the US Army Security Agency at Arlington Hall Station, VA.

These missions are being transferred as a part of the Army's implementation of the AlbAC study and consolidated with similar functional missions already located at Vint Hills and Fort Belvoir. It is a part of first phase of a three year program necessary to establish the new US Army Electronics Research and Development Command at a number of locations. 63 U/M OUNATITY Signals Warfare Labs Equipment SECTION B - COST ESTIMAT Deinstall ERADCOM Laser and 13 Leguipment deinstallation
packing, crating
handling and shipment
to Fort Belvoir, VA
b. Equipment deinstallation, Fort Monmouth packing, crating, handling and shipment to Vint Hills Farm Station, VA New Jersey STATE COUNTRY PROJECT TITLE 20 PRIMARY FACILITY DEPARTMEN 7 CATEGORY CODE NUMBER S. PROGRAM ELEMENT Army Peinstall, pack, crate, handle and shipment of laboratory ERADCON T-8 and other equipment from Wood, Evans and Wayside areas of Fort Monmouth, NJ to Fort Belvoir and Vint Hill PROJECT NUMBER d. NIDTH MILITARY CONSTRUCTION PROJECT DATA PHYSICAL CHARACTERISTICS OF PRIMARY FACILITY COST (\$ GROSS AREA . NO OF BLOCS 14 b. NO OF STORIES C. LENGTH SECTION A - DESCRIPTION OF PROJECT SUDGET ACCOUNT 685801 FUNDED PRIOR AUTHORIZATION AUTHORIZED Farms Station, VA. X . DESIGN CAPACITY QUANTITATIVE DATA P.L. CHICHOSED FRIOR AUTHORIZATION FIBCAL YEAR FUNDED, NOT IN INVENTORY 1977 MOITALINGALTHONIZATION סבבור ניסי בי בי בי בי מ CR STINS SUBSTANCARD s (Contd) TYPE OF CONSTRUCTION TOTAL REQUIRENENT ATLATED PROJECTS DD 704, 139 BAILTING ADTOCATE TYPE C. DESIGN A STANDARD DER SH F. DRAWING NO. FIRLACEMENT 17377783d ->36 *** 30 30 .. Equipment ** 0310 a0 v **** *** * * * * * 243,000 \$ 243,000 4. TEALTION PETENENT ******** . CC. . EKSION

Page No.

Director of Facilities and Equipment, ERADCOM

CS

DEFARTMENT OF DEFENSE, MILITARY
RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY
FLIGHT SIMULATOR PROGRAMS
(\$ in Thousands)

Section 9

Descriptive Summary Reference		708
FY 1979	1,700	5,100
FY 1978	1,414	6,156
FY 1977	950	5,391
FY 19TQ	120	1,100
FY 1976	300	2,876
Program Element/Project	6.32.09.A/DB39 - Flight Simulator Components	6.42.04.A/D275 - Synthetic Flight Training System

De la constitución de la constit